COUNTWAY LIBRARY
HC 3JBU 6

BOSTON
MEDICAL LIBRARY

IN THE
Francis A. Countway
Library of Medicine
BOSTON

Digitized by the Internet Archive
in 2016

https://archive.org/details/journalofmedical4019alab

INDEX TO VOLUME 39

JOURNAL of the Medical Association of the State of ALABAMA

DISPLAY

IN THIS ISSUE

Histoplasmosis of the Tongue Presenting as Carcinoma 29

The Pulmonary Alveolus, How It Works And What Affects It . . . 33

Malpractice Survey 47

THE FRANCIS A. COUNTWAY LIBRARY OF MEDICINE BOSTON

28 JUL 1970

TES-TAPE®
Urine Sugar Analysis Paper

Snip, dip, compare—that's all

An easy, accurate test-paper method for the qualitative and semiquantitative determination of urine glucose

Additional information available upon request.

Lilly
Leadership in Diabetes Research for Half a Century

Eli Lilly and Company • Indianapolis, Indiana 46206

000118

Medicine Office
Francis A. Countway Lib. of
Medicine
10 Shattuck St.
Boston, Massachusetts 02115

JULY 1970

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS

aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
28 JUL 1970

LACTINEX®

LACTINEX®

TABLETS & GRANULES

■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

Introduced to help reestablish the normal physiology of the intestinal tract in gastrointestinal disturbances[1], particularly diarrheas (including those resulting from antibiotic therapy), Lactinex is also useful for reestablishing the flora following bowel surgery, infant colic, mucous colitis, foul-smelling stools, pruritus ani, flatulence and hives.[2,3,4,5,6]

Lactinex contains a viable mixed culture of both *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(#LX06)

LX

References:

(1) Siver, R. H.: CMD, 21:109, September 1954. (2) Frykman, H. H.: Minn. Med., 38:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., 51:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., 15:15-16, October 1965. (5) Weekes, D. J.: NY State Jour. Med., 58:2672-2673, August 1958. (6) Ellis, S. and Spratt, J. S.: JOUR. AMER. GER. SOC., 18:410-415, May 1970.

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • July, 1970 • No. 1

Office of Publication
19 So. Jackson St. Montgomery, Ala. 36104
Subscription Price ..... $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. ..... Montgomery

Managing Editor
L. P. Patterson ..... Montgomery

Assistant Managing Editor
Mary Nell Williford ..... Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman
C. Kermit Pitt, M. D.
H. H. Hutchinson, M. D.
William L. Smith, M. D.
L. P. Patterson

Officers of the Association

President
S. Buford Word, M. D. ..... Birmingham

President-Elect
A. E. Thomas, M. D. ..... Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. ..... Brewton
J. E. Cameron, M. D. ..... Alexander City
O. Emfinger, M. D. ..... Union Springs
Wood S. Herren, M. D. ..... Birmingham

Secretary-Treasurer
William L. Smith, M. D. ..... Montgomery

Executive Director
L. P. Patterson ..... Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. ..... Decatur
J. P. Collier, M. D. ..... Tuscaloosa
Paul W. Burleson, M. D. ..... Birmingham
L. L. Hill, M. D. ..... Montgomery
M. Vaun Adams, M. D. ..... Mobile
J. D. Bush, M. D. ..... Gadsden
E. L. Strandell, M. D. ..... Brewton
John W. Davis, Jr., M. D. ..... Montgomery
J. Garber Galbraith, M. D. ..... Birmingham
H. G. Hodo, M. D. ..... Fayette

State Health Officer
Ira L. Myers, M. D. ..... Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1970
Delegate—E. Bryce Robinson, Jr., M. D., Fairfield
Alternate—W. E. White ..... Anniston

1971
Delegate—M. Vaun Adams, M. D. ..... Mobile
Alternate—E. L. McCafferty, Jr., M. D. ..... Mobile
Delegate—P. W. Burleson, M. D. ..... Birmingham
Alternate—Robert Parker, M. D. ..... Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. Fairfield
Alternate—W. E. White ..... Anniston

CONTENTS

President's Page 4

The Woman's Auxiliary 6

Editorial Comment 8

The Retreat From Civilization Can Be Precipitant 8

What Generation Gap? ISMS Can Find None At All 9

Guest Editorial—Urology, William C. Waller, M. D. 10

The Month In Washington 12

Index to Volume 39 21

Bcoks of Interest to Doctors and Patients 24

Doctors Who Play With Fire (Their Favorite Recipes) 27

Scientific Section 29

Histoplasmosis of the Tongue Presenting As Carcinoma, Malcolm D. McAuley, M. D., Birmingham 29

The Pulmonary Alveolus, How It Works And What Affects It, D. S. Tysinger, Jr., M. D., Dothan 33

Association Forum 47

Malpractice Survey, Walker Reynolds, Jr., M. D., F. A. C. S., Anniston 47

Fathers and Sons in Medicine 52

A Proud Alabama Father and Three Fine Sons In Medicine 52

3 Generations of Morgans Have Practiced in Alabama 54

Direct Patient Billing Aimed at Medicine's Middle Man 58

Changing Trends in Malpractice Litigation, Walter P. Gewin 60

Around the State 75

Vital Statistics 75

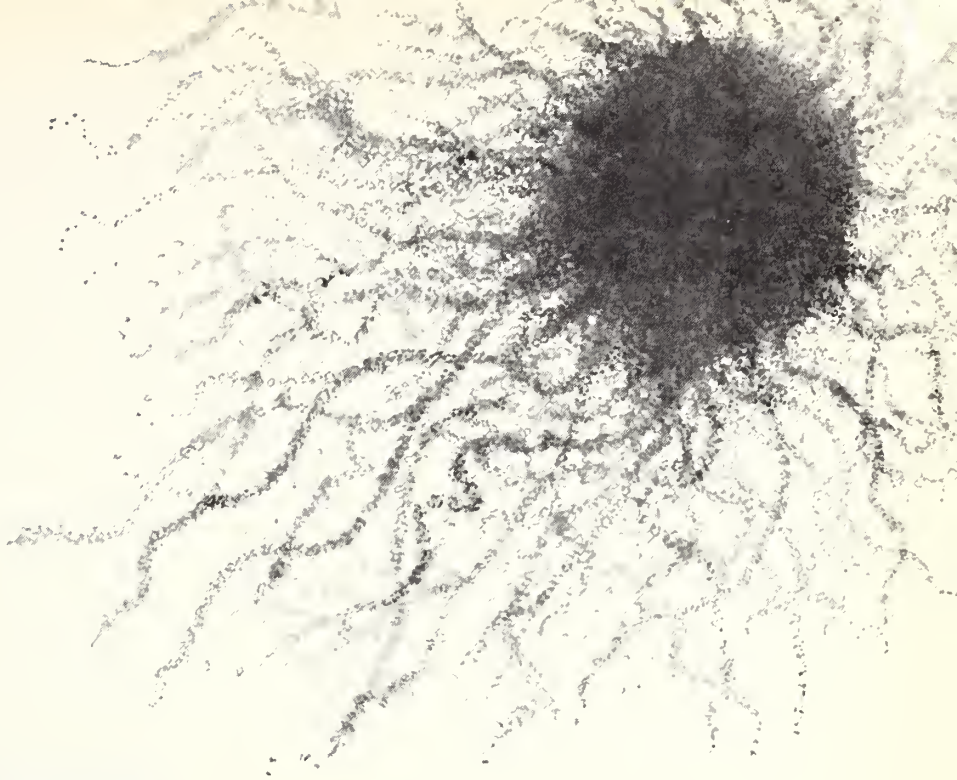
Hobbies to Fill A Doctor's Lesiure 80

And Boating Wins A Popularity Prize 80

Alabama Department of Public Health 83

Administrative Assistants Relieve County Health Officer Shortage 83

Flying, Fencing, Politics and Surgery Occupy This Doctor 86



Corticosteroid therapy week after week.

then antibiotic therapy last week.

and monilial overgrowth this week.

For many patients on long-term corticosteroid therapy, the addition of oral antibiotic therapy may trigger monilial overgrowth in the intestine. When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

it doesn't let monilia begin where bacteria end.

Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacter- is DECLOMYCIN® Demethylchlortetracycline, DECLOS- uld be equally or more effective therapeutically than other te- cyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes, a rare case of exfoliative dermatitis has been reported. Photosensitivity, onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 448-9

President's Page

S. Buford Word, M. D.

DRS AND ALAPAC

For centuries enlightened man has alluded to the shadows cast on the back walls of Plato's Cave. In the recent political primary not *you*, but your *participation* is the real substance that cast the shadow of the medical profession's influence in affairs of state in Alabama. It is the general opinion that tall shadows were cast with only a moderate amount of substance. A story in the June 4th issue of M. D. in relating the accomplishments of DRS and ALAPAC termed their success as "spectacular."

The credit for this spectacular success must be given to that small group of men who labored so diligently to achieve the goals established for them. They are:

The DRS Steering Committee—E. L. McCafferty, Jr., Mobile; Frank M. Phillippi, Brewton; Orizaba Emfinger, Union Springs; James E. Cameron, Alexander City; Arthur F. Toole, Talladega; Everett E. Hale, Jr., Tuscaloosa; James A. Davis, Jr., Birmingham; Henry G. Hodo, Jr., Fayette; and Charles L. Butler, Huntsville.

The ALAPAC Board of Directors—Grover C. Murchison, Jr., Chairman, Montgomery; John C. Sullivan, Secretary-Treasurer, Montgomery; Max V. McLaughlin, Mobile; F. M. Phillippi, Jr., Brewton; Louis L. Johnson, Dothan; Richard F. Bliss, Talladega; John Hall Nelson, Tuscaloosa; Julius N. Hicks, Birmingham; Ellis F. Porch, Arab; Carl A. Grote, Jr., Huntsville; and Mrs. Ben H. Johnson, Jr., Bessemer.

Since these two separate committees operate with the blessings of the Board of Trustees it is my opinion that every member of the Association should know how they operate.

ALAPAC is a committee endorsed by the State Medical Association whose purpose is to keep the membership educated in legislative affairs on a national and state level. For this purpose ALAPAC receives an appropriated reasonable sum to carry out this function as any other committee of the State Medical Association is supported. None of the appropriated housekeeping funds are spent for candidate support.

The dues for membership in ALAPAC is $35, ten of which is sent to AMPAC and twenty-five remains in ALAPAC's treasury here in Alabama. All of the money from dues is spent on candidate support mostly for congressional races for the U. S. Congress.

The past record of ALAPAC reveals that for every ten dollars sent to AMPAC, 20 dollars has been returned to ALAPAC to spend in congressional races here in Alabama. This year of course ALAPAC participated in the Lieutenant Governor's race because DRS had insufficient funds.

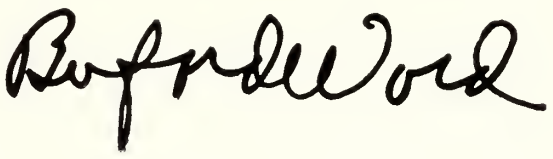
DRS was organized in the fall of 1969 to discover and support physicians who would be candidates for the State Legislature. No physician candidates were discovered and it was decided to support candidates whose

philosophies were considered favorable. The dues to DRS is $100, all of which goes for candidate support.

It is my impression both of these organizations of organized medicine in our State will accomplish more good if they are kept separate. There will be political activity this fall in congressional races and perhaps some physician candidates will seek State office in the Legislature in the general elections this fall.

Medicine's voice in the legislative halls has a more persuasive tone because of ALAPAC and DRS. These committees need to be ongoing and deserve a pat on the back for their efforts.

The substance that cast the shadow of medicine's image is *participation*. I know you want your profession to cast a good shadow.



Buford Word, M. D.

SMA Plans Largest Annual Meeting In 64-Year History

The 64th Annual Meeting of the Southern Medical Association, scheduled for Nov. 16-19 in Dallas, is expected to be the largest and most complete in the Association's history. The expansive four-day meeting, with each of 21 Specialty Sections presenting its own program, will focus upon new areas of medicine and scientific research. Outstanding specialists and medical leaders from many sections of the country will gather to exchange knowledge, with over 300 speakers participating in the interdisciplinary programs.

L. S. Thompson, Jr., M. D., General Chairman, heads the impressive list of Dallas members serving on the various committees which are charged with the immense responsibility of making numerous arrangements.

Officers of SMA include J. Leonard Goldner, M. D. (Durham, N. C.), President; Albert C. Esposito, M. D. (Huntington, W. Va.), President-Elect; J. Hoyle Carlock, M. D. (Ardmore, Okla.), First Vice-President; and Linton H. Bishop, Jr., M. D. (Atlanta, Ga.), Second Vice-President. Encompassing 16 Southern states and the District of Columbia, Southern Medical is America's second largest general medical organization, contributing the country's largest general medical publication, the *Southern Medical Journal.*

The Dallas Memorial Auditorium will house the majority of meeting activities—scientific sessions, business meetings, and the vast scientific and technical exhibits. A number of panel discussions and symposia of significant importance and general interest will be presented. Several distinguished scientific groups to meet conjointly with SMA are: The American College of Chest Physicians, Southern Chapter; the Flying Physicians Association; the Radiologic Society of North America; and Southern Gynecological and Obstetrical Society.

Again this year, the Association will play host to selected junior and senior medical students from 34 medical schools throughout the SMA sphere. This unique opportunity is designed to impart to the students early in their careers the value of continuing education.

The meeting will be open to all doctors of medicine who are members of their county or state medical societies, as well as to residents, interns, junior and senior medical students, nurses and medical technicians. There will be no registration fee.

With the addition of the full schedule of events slated by the Woman's Auxiliary, the Annual Golf Tournament, alumni reunions, and an array of entertainment highlighted by the President's Dinner Dance, SMA's 1970 meeting is destined to be the most successful to date.

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

Though it is summertime, and the living may be easy for some, not so for the Auxiliary's program planning and Structure Review Committee. This committee is reviewing all Auxiliary Procedures, streamlining duties of committee chairmen, and making recommendations for more effective use of Auxiliary womanpower. Women are concerned about war and peace, our schools, our children and youth, and the morality of our society. Women have the intelligence and courage to tackle problems, and are keenly aware and sensitive to those she is dealing with. Physicians' wives are proud of your profession—they are dedicated to its survival.

Because of this pride and dedication, and the pride physicians' wives take in working in their communities both as a group, and with other organizations, the County Auxiliaries are being asked, that while continuing to work on the many state projects, each set its own horizons, giving special consideration to its community needs. Any new project, of course, must have the advice and consent of the Medical Society.

The State Auxiliary's programs and projects will be well counselled this year by the newly appointed Advisory Council by Dr. Buford Word: Dr. John Chenault, Chairman; Dr. M. Vaun Adams, Dr. William Smith, Dr. Howard C. Johnson, and Dr. Gilder Wideman. I am grateful to these men for accepting this responsibility.

The Auxiliary projects are becoming more varied and vaster in scope. One or more should interest every doctor's wife in Alabama. We have tried to personally contact the wives in unorganized counties to explain our worthwhile program, and to ask them to join us, but have not been too successful. I know of no better way to reach these ladies than through this article in your journal. If your wife isn't a member, and you live in a county where there is no organized Auxiliary, please urge her to become a Member-at-Large. We have 19 ladies throughout the state who are Members-at-Large, and their contributions to the Auxiliary are invaluable.

Mrs. Howard C. Johnson

At the convention in Mobile, the House of Delegates voted to have a Member-at-Large from *each* of the four districts as a voting delegate at future conventions. All she has

to do is contact me, or any one of the five members of the Membership Committee: Mrs. J. Frank Trucks, 3830 Redmont Rd., Birmingham 35213; Mrs. George Hansberry, 2318 Brookside Drive, Decatur 35601; Mrs. D. S. Tysinger, 1402 Tacoma Street, Dothan 36301; Mrs. J. W. Maxwell, 3724 Calderwood, Mobile 36608; or Mrs. James D. Holliman, Jr., 732 Owens Drive, S. E., Huntsville 35801.

It is my greatest hope that each physician's wife in Alabama will be affiliated in some way with the Auxiliary. We are vital factors in presenting the TRUE image of our doctors. We know you best.

Sincerely,

Camille Johnson

Camille Johnson

CONFERENCE ON MALPRACTICE PREVENTION, July 23-24, 1970

RADIOISOTOPES TRAINING COURSE, August 3-7, 1970

ALABAMA DIABETES MEETING, September 13, 1970

IV ANNUAL POSTGRADUATE COURSE, RESPIRATORY CARE AND PULMONARY REHABILITATION, September 13-17, 1970

MEDICINE-TODAY — ALUMNI HOMECOMING SCIENTIFIC PROGRAM, September 18, 1970

For information write to Dr. Margaret S. Klapper, Director Division of Continuing Medical Education, University of Alabama School of Medicine, 1919 7th Avenue, South, Birmingham, Alabama 35233.

Not just a motel it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

'Health Brutality'—A Crisis

After a thorough examination of patients and hospitals in half a dozen representative cities, a team of doctors associated with the American Public Health Association has reported a national epidemic of "health brutality;" the symptoms are decay and deprivation, complicated by despair.

The physicians' findings—among them, an appalling shortage of doctors and local clinics, overcrowded public hospitals and acute suffering among the poor—are familiar enough, but not any less frightening. And they are firmly supported by a special Senate study detailing many reasons for what APHA describes as a "health crisis."

Focusing particularly on bureaucratic competition and administrative failures, a Senate Subcommittee uncovered repeated cases where almost wanton waste of federal health funds was routine.

—New York Post

The Retreat From Civilization Can Be Precipitant

There's a way to drive the lifesaver from his elevated perch above the swimming crowd. All one has to do is to make the rules too exacting, the responsibilities too costly.

Of course, they'll try to hang on for a while. It's a good job, lifesaving. Being paid for what one likes to do. And there's the thrill of the near-drowning victim's gratitude.

At first there will be limitations. At first, if the swimmer is too far from the lifesaver's high chair, he's a goner anyhow. When there is a question in his mind, who can blame the lifesaver for looking the other way?

The time will come, however, when no excuse is valid; when the pressure of half-baked investigations will be too much for comfort.

Then, once rid of that lithe-muscled, too-goodlooking individual, it is just another easy step to closing the swimming pool. Making the pool owner, inland, or the hotel owner, on the coast, responsible for the survival of their swimmers will close any enterprise of this sort—fast.

We'll return to the time when swimmers swim at their own risk.

There was a time when every male of the species homo sapiens either fought for his mate or ran away, just as ony other segment of life would do. There was a time when the mother fought to the death for her babies, whether that mother was a lioness, a lady or a louse.

But we've become "civilized" in our millenniums of progress from the cave to the castle to the courts. Responsibilities are generally delegated . . . for a price. And it is only when the price gets out of reach, as in the case of the hypothetical lifesaver's liability, that the system collapses.

We've come a long way from the magic of the jungle, the idols of the primitives, and the herbs of the frontier household. We have come almost as far from the doctor's image as put on canvas by Sir Luke Fildes less than a century ago.

But just make the rules too exacting, the responsibilities too costly, and see how fast civilization can tumble down the well, back to the bottom from which it has climbed.

There's a way to drive the lifesaver from his elevated perch above the swimming crowd.

What Generation Gap? ISMS Can Find None At All

What this world needs *most of anything* is a generation gap!

A gap is a cleft, an interruption of continuity, a blank space, a hiatus, a lacuna, among other things.

And you know what a generation is. Or do you?

The No. 1 dictionary meaning of generation is the act or process of producing offspring; procreation. The No. 2 meaning is production.

Another meaning, of course, is "a single stage or degree in the succession of natural descent: as father, son, and grandson are three generations." But that interpretation doesn't make sense in speaking of "a generation gap." For no two families in any community are alike, all children born at the same time. A generation in that instance is considered 30 years. It is like mixing water and ink in a tub and inviting those around you to draw a line between the two.

Earlier this year the Illinois State Medical Society (ISMS) conducted a survey, under the guidance of Matthew B. Eisele, M. D., chairman of the Council on Public Relations and Membership Services. The results of that survey are summarized under this caption:

WHAT "GENERATION GAP"?

"Following student protests at last summer's AMA meeting, there were claims that the medical profession was split by a serious generation gap," says the piece about it. "America's future doctor was characterized as a rebel, bent on revolutionizing every aspect of medicine.

"But is the shout of the noisy radical really the voice of the new physician?"

With a questionnaire, on 27 primary issues, there was full accord between ISMS members and students, interns and residents on 24 of them. For example, on:

—An education campaign for a liberalized abortion law should be launched.

—Methods for curbing the profession's "bad apples" should be improved.

—County medical societies should be active in developing local mental health services.

—Residents and interns should receive some training in neighborhood health centers.

—Research funds to universities should not be tied to the university's production of physicians.

Naturally, the degree of harmony differs from issue to issue. But only on three issues surrounding employment of physician's assistants and voluntary service in a community health center was there outright disagreement.

In this instance the medical society draws a distinct line between doctors in preparation and doctors in practice. But even that division will not stand up under microscopic examination, as the very agreement between the two groups verifies.

What this world needs most of anything is a generation gap! It needs a hiatus or lacuna in production.

And meantime let it be remembered that the silent majority by its silence is lending credence to a noisy few.

GUEST EDITORIAL

UROLOGY

The practice of urology is a rewarding specialty for both doctor and patient alike. It encompasses both the surgical and the medicinal aspects of medical care; thus mixing the positive, dynamic action of surgery with the ruminative ratocination of medicine. From the patient's point of view, there is the prompt relief of uncomfortable symptoms, on the one hand, and the solution of vexing diagnostic problems on the other.

In few other fields are pre-operative diagnostic studies so accurate; thus providing a sound basis for careful individualization of surgical procedures. There is very little exploratory surgery in which the operation is involved as the pathology materializes. This is not to belittle such procedures, but rather to point out how much more reassuring to doctor and to patient it is to have already resolved the therapeutic problems beforehand; with only the mechanical aspects of surgery to contend with at operation.

Urology as a specialty is frequently referred to as the treatment of diseases of the genito-urinary tract, but this is not entirely correct, as it applies thusly only to the male. In the female the genital tract is the exclusive preserve of the gynecologist, in some rare centers, and the happy hunting ground of the general surgeon almost everywhere else. Nowadays very few general surgeons attempt any urological surgery, not because of their lack of necessary skill, but because, without the pre-operative diagnostic armamentarium, their results do not stand up in comparison to those of the urologist. A missed stone or the removal of a kidney without adequate function in its mate is too great a price to pay for enthusiasm.

There is a multitude of women who haunt the urologist's office because of a little understood, but most distressing, discrepancy between adequate and inadequate vesical outlet capacity. These unfortunates present with symptoms of frequency, urgency, burning, supra-pubic pressure, back pain, leg ache—all or in part. All studies including intravenous pyelogram, urinalysis, urine culture and residual urine checks may prove normal. In the light of the aforementioned negative studies, the inability of the consulted practitioner to recognize the syndrome of vesical outlet obstruction may relegate the patient to continued misery with the additional stigma of neurosis.

The male counterpart of this condition is he who suffers from congestive prostatovesiculitis. The symptoms are remarkably similar and although the treatment is not precisely the same, the relief obtained by the ministrations of a thoughtful and sympathetic urologist is manifest by the throngs of enthusiastic patients crowding the atria of those in the practice of urology.

William C. Waller, M. D., Montgomery

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

Laboratory Combined Division All Reports for Period May 1970

	No. Specimens Received
General Bacteriology	2,621
Virology	250
Parasitology	2,322
Enteric Bacteriology	522
Fluorescent Microscopy	4,132
Tuberculosis	5,654
Mycology	129
Milk and Dairy Products	5,678
Water	3,631
Sea Foods	83
Syphilis Serology	30,110
Special Serology	1,849
Metabolic Diseases	6,655
Cytology	3,288
Chemistries	185
Miscellaneous	3,309
Total Number of Specimens Received	70,418

The pain of arthritis

relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

The Month in Washington

From the Washington Office
American Medical Association

The American Medical Association urged that Congress appropriate as much money as possible for medical education to help "meet the pressing need which exists today for an increased number of physicians."

Testifying before a House appropriations subcommittee, Dr. C. H. William Ruhe, director of the AMA's Division of Medical Education, said the association recognized the need for an overall reduction in federal spending to combat inflation.

"In view of this," he said, "we believe that in any appropriation priorities established for all government programs, those which affect health care should be given primary consideration. Further, because of the special need that exists at this period in our history for more physicians, we urged that appropriations relevant to the production of physicians be given first priority."

Dr. Ruhe pointed out that funds had not been appropriated for a backlog of approved applications for construction of facilities for new medical schools and expansion of existing schools as authorized by the Health Professions Education Assistance Act, the Health Research Facilities Construction Act and the Medical Library Act. He also said that full funding in the amounts authorized by the Health Manpower Act of 1968 is necessary to permit construction of new and expanded facilities before major enrollment increases in medical schools will be feasible.

"The provision in the Administration budget of funds for the Physician Augmentation Program and for special improvement grants has been a considerable incentive to medical schools to expand enrollments," Dr. Ruhe said. "But many schools have already increased their enrollments to full capacity in their existing facilities. Others have been in serious financial distress and are in desperate need of increased operational support to maintain their present enrollments or even to survive. It must be recognized that such schools will need further facilities and operating funds which are necessarily tied to increased enrollments."

The subcommittee's hearings were on appropriations for the 1971 fiscal year beginning this July 1.

Using funds appropriated for the current fiscal year, 1970, the Department of Health, Education and Welfare recently announced nearly 300 grants to schools of medicine and other health professions totalling more than $54 million.

About $7.6 million went to 27 schools of medicine and osteopathy under the Physician Augmentation Program. A government spokesman said the grants would enable the schools to increase their first year enrollment by 395 students.

About $46.5 million in institutional grants was allotted to 260 schools in the health professions—medicine, dentistry, osteopathy, podiatry, optometry, pharmacy and veterinary medicine. These funds also will enable the schools to add more students through purchase of new teaching equipment; improvement of the physical teaching environment, purchase of supplies, books and periodicals, and other expenditures to improve the education of students.

* * *

The American Medical Association supports extensions of the Regional Medical Programs and, with some reservations, the program for Comprehensive Health Planning and Public Health Services.

(Continued on Page 17)

Schering

After only one year:

Administered to more people than live in Montgomery and Gadsden.*

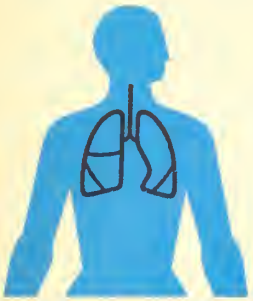
Injectable Garamycin®
brand of
gentamicin sulfate injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Montgomery and Gadsden is 205,000. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Mounting acceptance in the hospital...

Proven clinical effectiveness



Respiratory Infections

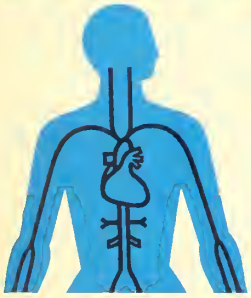
Outstanding results in serious gram-negative respiratory infections[1,2]

GARAMYCIN Injectable may prove successful where other antibiotics have failed.

Urinary Tract Infections

Strikingly effective in selected urinary tract infections[3]

With relatively low intramuscular doses, the promptly attained levels of GARAMYCIN achieved in the urine are considerably higher than the concentrations required for effectiveness against virtually all susceptible gram-negative pathogens. (Appropriate precautions are indicated in patients with impaired renal function; consult Package Insert for full details.)



Septicemia

May be lifesaving[4-6]

Numerous investigators have drawn attention to the value of GARAMYCIN Injectable in the treatment of gram-negative septicemias, often complicated by shock. Many hospital strains of *Serratia* are susceptible.[6]

Wounds and Burns

Response may be dramatic in wounds and burns complicated by sepsis[7]

The established efficacy of GARAMYCIN Injectable against *Pseudomonas*—as well as most other gram-negative pathogens—makes it an especially useful agent in the treatment of infected wounds and burns.

Important Precautionary Note Patients receiving treatment with GARAMYCIN Injectable (gentamicin sulfate injection) should be under close clinical observation because of the toxicity associated with the use of the drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with preexisting renal damage, treated with GARAMYCIN Injectable for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with preexisting renal damage.

This drug should be limited to the treatment of serious infections caused by susceptible gram-negative bacteria, with due regard for relative antibiotic toxicity. (See Clinical Considerations section.)

Mounting evidence in the laboratory...

Schering

Over 95% gram-negative pathogens sensitive.*

No other antibiotic performed comparably *in vitro* against gram-negative pathogens.
In a nationwide culture audit of antibiotic sensitivity patterns, sensitivity reports from 106 hospitals, geographically representative by census tract and of varying sizes, were analyzed. During the three-month period, ***every*** gram-negative culture slip from ***every*** hospital was surveyed. The total number of cultures involved in the audit was 97,091. The total number of sensitivity determinations was 643,503.

Pathogens	Percentage of sensitive strains Number of strains tested Antibiotics*							
	Garamycin	Kanamycin	Cephalothin	Cephaloridine	Ampicillin	Colistimethate	Chloramphenicol	Tetracycline
Klebsiella pneumoniae	99.5% 962	84.7% 992	86.2% 995	76.1% 67	32.7% 1,020	96.3% 640	82.9% 1,028	77.1% 1,026
Aerobacter aerogenes	95.9% 2,739	86.1% 2,818	53.5% 2,985	58.8% 1,514	22.7% 3,066	88.6% 2,603	85.8% 3,071	67.8% 2,981
Klebsiella aerobacter group	98.8% 566	83.9% 547	66.1% 522	60.5% 276	28.0% 553	89.5% 560	86.2% 587	62.8% 433
Klebsiella, all others	92.7% 2,944	83.3% 3,186	77.4% 2,976	67.5% 627	13.5% 2,883	95.0% 2,105	81.6% 3,212	70.6% 3,063
Pseudomonas aeruginosa	91.6% 4,528	29.8% 4,460	6.6% 4,418	6.6% 1,279	6.0% 4,360	91.3% 3,852	26.9% 4,608	26.4% 4,404
Proteus, indole-positive	91.8% 1,031	85.8% 1,062	39.9% 981	54.1% 364	40.2% 1,042	10.3% 758	76.1% 1,096	42.1% 1,051
Proteus mirabilis, indole-negative	94.9% 3,272	90.1% 3,378	83.1% 3,290	77.5% 975	78.0% 3,274	8.8% 2,634	85.9% 3,469	26.8% 3,278
Proteus, unspecified	96.2% 1,335	85.8% 1,371	71.7% 1,434	70.0% 647	64.7% 1,435	11.2% 1,233	76.0% 1,421	22.4% 1,298
Escherichia coli and all other *Escherichias*	96.4% 12,557	91.4% 12,818	87.8% 12,686	88.8% 4,251	74.6% 12,899	95.4% 10,623	94.1% 13,086	70.0% 12,559
Paracolobactrum, all	93.4% 303	88.9% 325	62.0% 305	74.2% 62	43.8% 340	80.9% 215	87.1% 350	72.6% 340
Coliform bacteria	99.0% 593	91.2% 649	81.5% 637	66.7% 21	52.7% 624	95.6% 607	91.6% 678	76.1% 637
Totals	95.1% 30,830	80.5% 31,606	65.3% 31,229	68.1% 10,083	50.3% 31,496	75.8% 25,829	79.7% 32,606	56.5% 31,070
Gram-positive (included for consistency with Package Insert, not an approved indication)								
Staph—*S. aureus,* coagulase-positive	97.4% 1,548	88.8% 1,458	97.7% 2,050	98.7% 636	61.1% 1,559	20.4% 628	94.4% 2,123	83.7% 1,966
Staph—*S. aureus,* unspecified	99.3% 993	92.8% 902	98.1% 1,289	95.3% 213	45.8% 1,153	29.3% 116	96.4% 1,427	82.3% 1,360

*Adapted from a three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August,1969).[6]
Antibiotics with significant gram-negative spectra are included. Organisms are listed as reported by laboratory.
Sensitivity testing was done by the disc method, a generally reliable test in the hospital setting. It should be noted, however, that the results with GARAMYCIN were somewhat higher than the results reported where the tube dilution technique was used. (See Clinical Considerations section which follows.) The concentration of the GARAMYCIN disc was 10 mcg.
Whereas standard testing methods were used by all hospitals, it is acknowledged that in a survey of this kind considerations such as differences in methodology are possible sources of error. The comparative percentage-sensitivity results derived from a survey of this kind are, therefore, not absolute. One should keep in mind also that the proper selection of an antibiotic is based not only on susceptibility testing but on relative toxicity and other clinical considerations as well.
It is felt, nonetheless, that the broad scope of the survey and the extreme care in data collection and tabulation permit a conclusion that the results are *generally* representative of current nationwide antibiotic sensitivity patterns.

Injectable Garamycin®
brand of gentamicin sulfate injection

See Clinical Considerations section on last page...

Injectable Garamycin®

brand of gentamicin sulfate injection

Schering

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
	Less Severe	**Resistant/ Moderately Severe**	**Serious/Life-Threatening**
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	0.8-1.2 mg./kg. for 7-10 days	Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	up to 5 mg./kg.
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa*, and species of indole-positive and indole-negative *Proteus*, *Escherichia coli*, and *Klebsiella-Aerobacter*. Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(44%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa*, 828 (93%); *Escherichia coli*, 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa*, *Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

Adverse Reactions: The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

References: (1) Brayton, R. G., and Louria, D. B.: Gentamicin in gram-negative urinary and pulmonary infections, Arch. Int. Med. *114*:205, 1964.* (2) Louria, D. B.; Young, L.; Armstrong, D., and Smith, J. K.: Gentamicin in the treatment of pulmonary infections, J. Infect. Dis. *119*:483, 1969. (3) Cox, C. E.: Gentamicin, a new aminoglycoside antibiotic: Clinical and laboratory studies in urinary tract infections, J. Infect. Dis. *119*:486, 1969. (4) Groll, E.: Clinical experience with gentamicin, data from 12 German clinics, in Gentamicin: First International Symposium, Paris, January 1967, Lucerne, Essex Chemie AG, pp. 121-128.* (5) Jackson, G. G.: Laboratory and clinical investigation of gentamicin, *ibid.*, pp. 62-74. (6) Medeiros, A. E.: Discussion, J. Infect. Dis. *119*:533, 1969. (7) Polk, H.: Discussion, J. Infect. Dis. *119*:529, 1969. (8) Three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August, 1969).

*Dosage in this investigational study was less than now recommended in Package Insert.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.

(Continued from Page 12)

Testifying before a House Public Health and Welfare Subcommittee, Dr. Bland W. Cannon, Memphis, Tenn., a member of the AMA's Council on Medical Education, emphasized that the AMA believes that RMP "should continue as a program of continuing medical education, with patient care being limited to demonstrations as an adjunct of the education and research processes."

He said the AMA opposes legislation that would combine the individual programs.

"These programs are relatively new and we believe should be evaluated, as well as allowed to develop further evidence of their individual strengths and weaknesses," he said.

Dr. Cannon pointed out that the AMA House of Delegates last December affirmed its support of the concept of Regional Medical Programs and urged AMA members to participate at all levels in giving guidance to implementing the programs.

The AMA supports broadening the scope of the programs to include "other major diseases," in addition to heart disease, cancer and stroke, he said.

He said a combination of the programs would result in a change toward emphasis on patient care in RMP.

"We would view with grave concern any attempt to change this essentially educational program to a program for the provision of health services," Dr. Cannon said. "The medical profession today generally views RMP as a means of aiding the physician to provide better care to his patients. It is this attitude which has brought about the outstanding cooperation between practicing physicians and RMP and which has been a major cause of success for the program thus far. If RMP returns to an earlier concept of providing services to the patient, rather than its present goal of assisting the individual physician to treat the patient more effectively, this cooperation will, in many cases, be lost. The program's beneficial accomplishments will then be diminished."

* * *

The American Medical Association supports in general, legislation (S. 3835) that would provide a comprehensive federal program for the prevention and treatment of alcohol abuse and alcoholism.

Dr. Marvin A. Block, Buffalo, N. Y., a member of the AMA's Committee on Alcoholism and Drug Dependence, termed the measure "a major landmark in public policy" in the field.

"It sets forth the proposition that alcoholism is an illness which can and should be treated, and it commits national resources to the establishment and coordination of facilities necessary for treatment and rehabilitation," he said at a hearing of the Senate Subcommittee on Alcoholism and Narcotics. "We are in general agreement with this legislation."

The bill would establish a National Institute for the Prevention and Control of Alcohol Abuse and Alcoholism. The Health, Education and Welfare Secretary, acting through the institute, would be required to submit within one year a detailed federal program, develop model programs for states, and conduct research and educational programs. Federal grants would be authorized for prevention, treatment and rehabilitation facilities and programs at the state and local level.

Dr. Block specifically favored several of the bill's provisions, including one that treatment and control programs should be community based, whenever possible.

"Insofar as it is feasible and economically sound, most alcoholics should be treated in their own communities and not be relegated to a distant centralized institution for treatment," he said.

But the AMA spokesman questioned some

other provisions. He saw no need for a new institute. He said the present National Center for Prevention and Control of Alcoholism could perform the proposed institute's duties and responsibilities.

He said the AMA also questions whether alcoholics should be made eligible for welfare cash benefits and for health care under other government programs, such as medicare and medicaid, on the ground that they are alcoholics.

Noting that the legislation is concerned mainly with operation of programs by public and voluntary agencies, Dr. Block said:

"We should not overlook, however, the role that the private physician has played, and can play, in this important area. More and more, the physicians of this country are facing up to the problem of alcoholism in their daily practice. They are recognizing that, as difficult as alcoholism may be, it is an illness which can be dealt with, and that they can help their patients in cooperation with other professionals in the community."

The bill was introduced by Sen. Harold E. Hughes (D., Iowa), a recovered alcoholic and chairman of the subcommittee, and 37 co-sponsoring senators.

* * *

L-dopa, a new treatment for Parkinson's disease, has been approved for general prescription use but it may be several months before it is available in ample supply.

"Clinical tests conducted during the past several years by medical researchers and two major drug firms have demonstrated the usefulness of L-dopa in the treatment of this disease which now afflicts possibly a million persons," FDA Commissioner Charles C. Edwards, M. D., said.

Approvals were granted to applications made by Hoffman-LaRoche, Inc., and Eaton Laboratories Division of the Norwich Pharmacal Co., Norwich, New York. Both firms conducted studies in animals and humans to establish the drug's safety and effectiveness. An analysis of these studies indicated that benefits to the patient outweigh the risks involved, the FDA said.

"However, the Food and Drug Administration will require both drug firms to continue research into the drug's long-term effects and make certain it is safe and effective for long-term use," Dr. Edwards said. "This is the first time that FDA has included such a requirement in a new drug approval."

In order to give a balanced picture, Edwards pointed out that:

—Clinical studies have shown that approximately one-third of the patients receiving L-dopa do not respond favorably.

—Side effects have been reported in a majority of patients, some of them quite unpleasant and others even dangerous. Whether or not the use of this drug is justified in the very early stages of Parkinson's has not been established.

—Since Parkinsonism is a chronic disease, patients will have to take L-dopa for long periods of time. We don't know how these patients will react after 5, 10, or 15 years of treatment. Because of our limited knowledge of the drug's long-term toxicity, it is conceivable that it could reverse the benefit to risk ratio.

The name L-dopa comes from the initials of an amino acid, levodihydroxyphenylalanine. Dr. George C. Cotzias, of the Medical Research Center, Brookhaven National Laboratory in Upton, New York, was the first to demonstrate the usefulness of L-dopa at high dosage levels. Dr. Andre Barbeau, director of the Department of Neurobiology at the Montreal Clinical Research Institute, has been studying the new drug for the past 10 years and is also credited with aiding in its development as a treatment for Parkinsonism.

* * *

A marked increase in syphilis cases in the United States was reported by the Nationl Communicable Disease Center for the first four months of this year.

The infectious disease jumped as much as 50 per cent or more in some areas while the nation as a whole experienced an increase to 6,861 cases from 6,203 for the same four-month period last year. One of the biggest increases was noted in New York City where 1,241 cases were reported as compared with 863 for the same period last year.

* * *

Congress approved legislation extending the 24-year-old Hill-Burton federal-aid-to-hospitals program for three years with authorized expenditures of $2.76 billion.

The final form of the legislation was a compromise agreed to by House and Senate conferees after the two branches of Congress passed differing versions.

The authorized expenditures broke down: $1.26 billion for various state grant-in-aid programs for construction and modernization of hospitals, and $1.5 billion for loan guarantees. The measure also authorizes funds to subsidize interest payments on loans up to three per cent.

The legislation approved by the conferees followed the House version for the most part. The Senate had approved a five-year $6.2 billion bill. The conferees eliminated entirely a Senate provision for $750 million of direct loans for public hospitals, which was strongly opposed by the Nixon Administration.

Also knocked out was a Senate amendment for a new formula for allocation of federal funds in a way that would have benefited large industrial states. However, the Health, Education and Welfare Department was directed to make a study of possible formula changes and report to Congress in two years.

* * *

Two physicians and a management expert were appointed Deputy Assistant Secretaries for Health, three long-vacant posts in the Department of Health, Education and Welfare.

The appointees are:

—Dr. Thomas C. Points, Oklahoma City, Okla., for Health Services. He is an alternate in the AMA House of Delegates and on the AMA Council on Health Manpower. As director of the Department of Preventive Medicine at the University of Oklahoma Medical Center, he helped establish the state's rural health project, "Project Responsibility."

—Dr. LeRoy A. Pesch, Buffalo, N. Y., for Health Manpower. He was dean of the School of Medicine at the State University of New York at Buffalo.

—Gerald Riso, New York City, formerly with Booz Allen and Hamilton, Inc., management consultants, for Policy Implementation.

Still vacant in early June were the posts of Deputy Assistant Secretary for Research and Development and for Environmental Health and Prevention of Disease Problems.

Dr. Morris E. Chafetz, director of Clinical Psychiatric Services of Massachusetts General Hospital, Boston, was selected to succeed Dr. Jack Mendelson as chief of the National Center for the Prevention and Control of Alcoholism. Dr. Mendelson is returning to a teaching post at Harvard Medical School.

Two high-ranking officials left the HEW Department with critical blasts directed at their bosses.

Dr. Stanley F. Yolles said he quit as director of the National Institutes of Mental Health because the Nixon Administration had abandoned the mentally ill. HEW Secretary Robert H. Finch said he was fired because he was not cooperative. Dr. Yolles was succeeded by Dr. Bertram Brown who had been deputy director. Despite the dispute, Dr. Yolles will stay in HEW until Nov. 1 as an assistant for mental health to Dr. Vernon Wilson, new director of HEW's Health Services and Mental Health Division. Dr. Wilson succeeded Dr. Joseph T. English

who resigned quietly to take a high public health post in New York City.

Robert J. Myers, chief actuary of the Social Security Administration for 23 years, resigned with a charge that Social Security Administrator Robert M. Ball had attempted "to muzzle and intimidate me with regard to three speeches that I was making in support of the Nixon Administration's position on social security legislation." Ball denied it, and countered that Myers, who was supposed to be an objective career civil servant, had wanted to be a policy spokesman.

Myers had publicly accused Ball and other high SSA officials of being "expansionists" in the social security field with a goal of the federal government providing a retirement income level virtually as high as before retirement.

In a letter of resignation, Myers told Finch that these officials "have not—and will not —faithfully and vigorously serve the Nixon Administration."

A Hair-Raising Policy Statement From Georgetown

In these days when all the news seems grim, a news release on hair styles from prestigious Georgetown University School of Medicine comes as comic relief or like the first promise of springtime.

In all seriousness, the release gives in detail the results of a survey and study conducted in 1969 with 1,800 questionnaires sent to all students, faculty and house staff members. A joint Faculty-Student Liaison Committee pondered some 557 replies (over 32 per cent response) and, after due deliberation, propounded the following policy statement on the basis of the replies: "A professional person should be neat and clean at all times. Moustaches, beards, long hair and sideburns and other styles are not objectionable in themselves if they match an otherwise good appearance."

"Effect, if any, on patients resulting from the current styles was not judged in the survey because of the difficulty of measuring patient reaction," according to Dean Rose.

The survey was concerned with the desirability of setting up standards of personal appearance; whether long hair, moustaches and sideburns evoked an unfavorable response from patients and faculty; and whether hair styling could have anything to do with student grades.

The need for a reasonable "appearance policy" was favored by 54 per cent of the students and 76 per cent of the house staff and faculty. More students than faculty members thought the hair situation might have an effect "occasionally" on grades. All 3 groups agreed that hair styles "frequently" or "occasionally" resulted in a negative response by the patient when worn by a medical student or house officer, less when worn by a private physician.

The response was generally negative on hair style affecting a person's professional performance. The ratio stood about 5 (students): 2 (faculty) on its effect on professional opportunities for medical students.

Moustaches and sideburns were considered the least offensive, generally speaking. Long sideburns are worn by 44 per cent of the students, 30 per cent of the house staff, and 14 per cent of the faculty. Moustaches appear on 8 per cent of the students, 4 per cent of the house staff, and 6 per cent of the faculty. Long hair adorns 2, 16, and 17 per cent of faculty, house staff, and students, respectively. And Georgetown concludes its 3 pages of statistics on this timely subject by stating that 34 per cent of the students, 54 per cent of the house staff, and 70 per cent of the faculty who answered the survey rejected all 3 modes for themselves.

A. L. E.

Medical Annals
District of Columbia

INDEX

THE JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Volume 39

July 1969—June 1970

Explanatory Notes

Arrangement of Index

I. Authors

II. Titles

III. Association Forum

IV. Alabama Department of Public Health

I. AUTHORS

B.

Blount, Walter P., M. D.—Early Recognition and Prompt Evaluation of Spinal Deformity, 749

Bolding, O. Thomas, M. D.; Wilcutt, Herman C., Ph. D.—Physiological and Psychological Evaluation of the Estrogen Deprived Patient, 459

Brascho, Donn J., M. D.; Durant, John R., M. D.; Moody, Frank G., M. D.; Roth, Robert E., M. D.; and Maddox, William A., M. D.—A Proposal for the Management of Hodgkin's Disease at the University of Alabama Medical Center, 1107

C.

Carmichael, Erskine, M. D.—Laparoscopy in Gynecology 241

G.

Grimley, K. W.—Volunteers and Tuberculosis, 1021

H.

Hudson, Henry C., M. D.; Scofield, George F., M. D.; Hundley, Rube, M. D.; Gates, William, Jr., M. D.—Renal Angiomyolipomas: Report of Two Cases and Review, 141

L.

Laws, Henry L., M. D.—Peripheral Vascular Injuries, 913

M.

Marshall, Wallace, M. D.—Normal and Abnormal Behavior from Learning, 40

Marshall, Wallace, M. D.—Immunologic Augmentations for Learning and Psychiatry, 243

Marshall, Wallace, M. D.—Immunologic Psychology and Psychiatry, 649

Moody, Frank G., M. D.—The Latest Concepts in Surgical Management of Peptic Ulcer Disease, 464

N.

Nachman, Mrs. Louise—A Patient Speaks, 1016

R.

Rackley, Charles E., M. D.—Specialized Hospital Care of Coronary Artery Disease, 551

Reque, Paul G., M. D.; Lauderdale, Robert O., M. D.—"The Use of Locorten (Flumethasone Pivalate) Cream in the Treatment of Common Dermatoses," 919

S.

Schwartz, Ferdinand F., A. B., B. S., M. D., F. I. C. A., A. A. P. M. R., M. R. S. H.—If Life Is Prolonged, Make it Enjoyable, 361

Shedd, Charles L., Ph. D.—The Concept of "Readiness" and Learning Disabilities, 29

Spira, Henry, M. D., F. A. P. A.—The Meal Ticket Syndrome, 37

T.

Till, Harry J., M. D.; Cameron, John M., M. D.; Dorrough, Robert L., M. D.—Pylephlebitis and Liver Abscesses Following Appendicitis, 831

Turner, A. Jack, Ph. D.; Michels, T. J., Ph. D.—The Psychologist as the Psychiatrist's Pathologist, 150

Tysinger, D. S., Jr., M. D.—The Place of Respirators in the Coronary Care Unit, 355

Tysinger, D. S., Jr., M. D.—Pulmonary Function Testing for the General Hospital and Physician (Part I), 555

Tysinger, D. S., Jr., M. D.—Pulmonary Function Testing for the General Hospital and Physician (Part II), 658

Tysinger, D. S., Jr., M. D.—Pulmonary Function Testing for the General Hospital and Physician (Part III), 756

Tysinger, D. S., Jr., M. D.—Pulmonary Function Testing for the General Hospital and Physician (Part IV), 834

Tysinger, D. S., Jr., M. D.—Pulmonary Function Testing for the General Hospital and Physician (Part V), 922

Tysinger, D. S., Jr., M. D.—Pulmonary Function Testing for the General Hospital and Physician (Part VI), 1113

W.

Wool, Verna, Ph. D.—The Psychology of the Tuberculous Patient, 1011

II. TITLES

A.

A Patient Speaks (Nachman), 1016

C.

Concept of "Readiness" and Learning Disabilities, The (Shedd), 29

E.

Early Recognition and Prompt Evaluation of Spinal Deformity (Blount), 749

I.

Immunologic Psychology and Psychiatry (Marshall), 649

Immunologic Augmentations for Learning and Psychiatry (Marshall), 243

L.

Laparoscopy In Gynecology (Carmichael), 241

Latest Concepts in Surgical Management of Peptic Ulcer Disease, The (Moody), 464

Life is Prolonged, Make it Enjoyable, If (Schwartz), 361

M.

Meal Ticket Syndrome, The (Spira), 37

N.

Normal and Abnormal Behavior from Learning (Marshall), 40

P.

Peripheral Vascular Injuries (Laws), 913

Physiological and Psychological Evaluation of the Estrogen Deprived Patient, (Bolding, Wilcutt), 459

Place of Respirators in the Coronary Care Unit, The (Tysinger), 355

Proposal for the Management of Hodgkin's Disease at the University of Alabama Medical Center (Brascho, Durant, Moody, Roth, Maddox), 1107

Psychologist as the Psychiatrist's Pathologist—A Rebuttal (Turner, Michels), 150

Pulmonary Function Testing for the General Hospital and Physician (Part I) (Tysinger), 555

Pulmonary Function Testing for the General Hospital and Physician (Part II) (Tysinger), 658

Pulmonary Function Testing for the General Hospital and Physician, (Part III), (Tysinger), 756

Pulmonary Function Testing for the General Hospital and Physician, (Part IV), (Tysinger), 834

Pulmonary Function Testing for the General Hospital and Physician, (Part V), (Tysinger), 922

Pulmonary Function Testing for the General Hospital and Physician, (Part VI), (Tysinger), 1113

Psychology of the Tuberculous Patient, The (Wood), 1011

Pylephlebitis and Liver Abscesses Following Appendicitis, (Till, Cameron, Dorrough), 831

R.

Renal Angiomyolipomas: Report of Two Cases and Review, (Hudson, Scofield, Hundley, Gates), 141

S.

Specialized Hospital Care of Coronary Artery Disease (Rackley), 551

U.

"Use of Locorten (Flumethasone Pivalate) Cream in the Treatment of Common Dermatoses, The" (Reque, Lauderdale), 919

V.

Volunteers and Tuberculosis (Grimley), 1021

III. ASSOCIATION FORUM

Development of Areawide Comprehensive Health Planning Agencies In Alabama, 704

Drs. Wilbur and Rogers Differ on Future of Medicine, 157

Health Problems in Colonial Alabama, 1051

Medicaid Payment for Individual Practitioners—A Definition, 255

Peer Review and Medicaid, 1125

Peer Review Polishes Mirror for Improved Doctor's Image, 819

Percentile Payment Formulas as Used in Medicare and Medicaid, 260

Review of Legislative Developments Relating to Health and Medicine, 367

Rising Medical Care Costs—What to Do?, 791

SSA Regulations for Coverage of Injections, 567

Tubal Ligation and Abortion in the State of Alabama, 945

Use of Prisoners for Drug Trials in Alabama, The, 396

IV. ALABAMA DEPARTMENT OF PUBLIC HEALTH

A Survey to Assess Public Participation in a Rubella Immunization Program in an Alabama County, 537

Darkfield Microscopy Quickly Diagnoses Syphilis, 795

Health Education Curriculum Development Workshop, 345

Huge TVA Nuclear Poser Plant Checked for Pollution, 876

Intensified Tuberculosis Program in Tuscaloosa County, 637

Manpower Shortage No. 1 Health-Planning Challenge, 51

Mobile County—A Child Centered Program to Prevent Tuberculosis, 183

Pesticide Program Begun, 508

Registered Nurse Utilization—A Key to Improved Patient Care, 973

BUREAU OF PREVENTABLE DISEASES

Frederick S. Wolf, M. D., Director

Current Morbidity Statistics

1970

	April	May	*E. E. May
Tuberculosis	102	96	130
Syphilis	32	23	129
Gonorrhea	698	749	345
Chancroid	0	0	2
Typhoid fever	1	1	0
Salmonella	17	30	11
Undulant fever	0	0	0
Shigella	8	7	5
Amebic dysentery	0	1	3
Scarlet fever & strep. throat	435	383	200
Diphtheria	0	0	0
Whooping cough	3	2	3
Meningitis	14	5	6
Tularemia	0	0	0
Tetanus	1	2	1
Poliomyelitis	0	0	0
Encephalitis	1	1	0
Smallpox	0	0	0
Measles	1	38	292
German measles	49	64	11
Chickenpox	175	156	79
Mumps	43	34	68
Infectious hepatitis	44	53	39
Typhus fever	0	0	0
Rocky Mt. spotted fever	0	1	0
Malaria	0	4	0
Cancer	439	721	728
Rheumatic fever	7	6	13
Rheumatic heart	19	21	18
Influenza	103	15	90
Pneumonia	417	334	297
Rabies—Human cases	0	0	0
Pos. animal heads	4	8	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

The more corrupt the state, the more laws. —Tacitus.

"Don't believe the world owes you a living; it doesn't owe you a thing—it was here first."—Robert Burdette.

Books of Interest to Doctors and Patients

Pursuit Of The Unconscious

THE DISCOVERY OF THE UNCONSCIOUS (The History and Evolution of Dynamic Psychiatry), by Henri F. Ellenberger, Basic Books, New York, xvi + 932 pages of text + 28 pages of illustrations—$15.

A subject, born with the first created kingdoms and organized religions of six thousand years ago, that remained in its cradle until the 20th century, and as covered in this monumental work, already has elicited such unqualified acclaim as a "masterly work," a "proud and brilliant achievement," and "enormously stimulating."

An M. D. who has taught psychiatry at Menninger and McGill, currently Titular Professor of Criminology at the University of Montreal, Dr. Ellenberger is author of more than a hundred articles in the fields of psychiatry, psychology, and the history of medicine, will be remembered as co-editor of *Existence*, published 12 years ago by Basic Books. In this huge book he ranges from a look at the healing practices of primitive peoples to the influence of Darwin and Marx, exploring the psychological systems of Janet, Freud, Adler, and Jung—a new, integrated look at man's long search for an understanding of the inner reaches of his mind.

In brief, *The Discovery of the Unconscious* is a book "combining the most profound erudition and impeccable scholarship with an enviable simplicity and elegance of expression," with a built-in appeal to the educated lay reader as well as to the specialist, fascinating reading in an invaluable reference.

—W. J. MAHONEY, JR.

AF Okays Way To Health

THE NEW AEROBICS, by Kenneth H. Cooper, M. D., Lieutenant Colonel, Medical Corps, U. S. A. F., M. Evans and Company, New York, 191 pages—$5.95.

Just two years ago Dr. Cooper's first book, *Aerobics*, appeared on the American book market to soar to immediate success. Its exercise program, now officially adopted by the United States Air Force, has changed the lives of millions of Americans.

His new book is different. For where his first was motivational, this one is more an "Aerobics Handbook" or "Aerobics Guidelines." And it should very promptly attain the popularity of its predecessor.—M.

Body Can Tell No Lies

BODY LANGUAGE, by Julius Fast, published by M. Evans of New York, distributed by J. B. Lippincott of Philadelphia, 192 pages—$4.95.

The lips may tell all the lies they like, but the body can never lie, the author of this fascinating book on the new science of kinesics insists. And he proceeds to cite case history after case history to prove it.

He writes of "territorial imperatives" (or the space on which we subconsciously insist), on the masks we wear, on "the wonderful world of touch," on the silent language of love, and of how we tell all by the way we walk or stand or sit, the way we gesture or grimace or pitch our voices. It is a fascinating and original work.—M.

(Continued on Page 27)

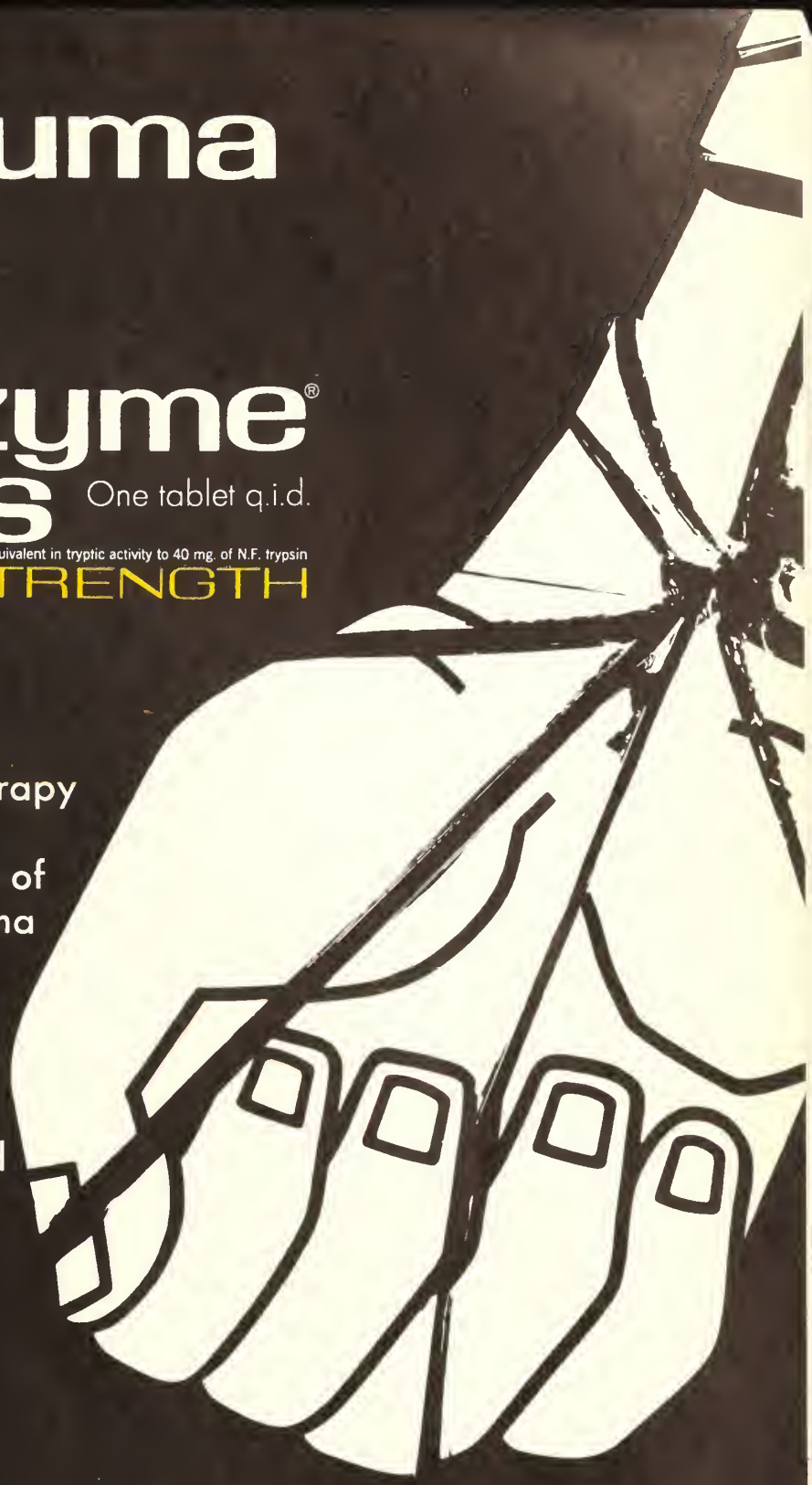
in trauma

new Orenzyme® Bitabs

One tablet q.i.d.

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units.; equivalent in tryptic activity to 40 mg. of N.F. trypsin

DOUBLE STRENGTH



Proteolytic enzyme therapy specifically indicated for the rapid resolution of inflammation and edema as adjunctive therapy in accidental and surgical trauma.

1 tablet q.i.d. provides recommended therapeutic dose at lower cost.

A FULL DAY'S DOSAGE

Description: ORENZYME BITABS offers the therapeutic effects of trypsin in an oral form as adjunctive therapy for the rapid resolution of inflammation and edema. ORENZYME BITABS is convenient to use, promotes patient cooperation and is ideally suited for maintenance therapy following parenteral trypsin.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:

- ☐ Accidental Trauma
- ☐ Postoperative Tissue Reactions.

Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.

Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.

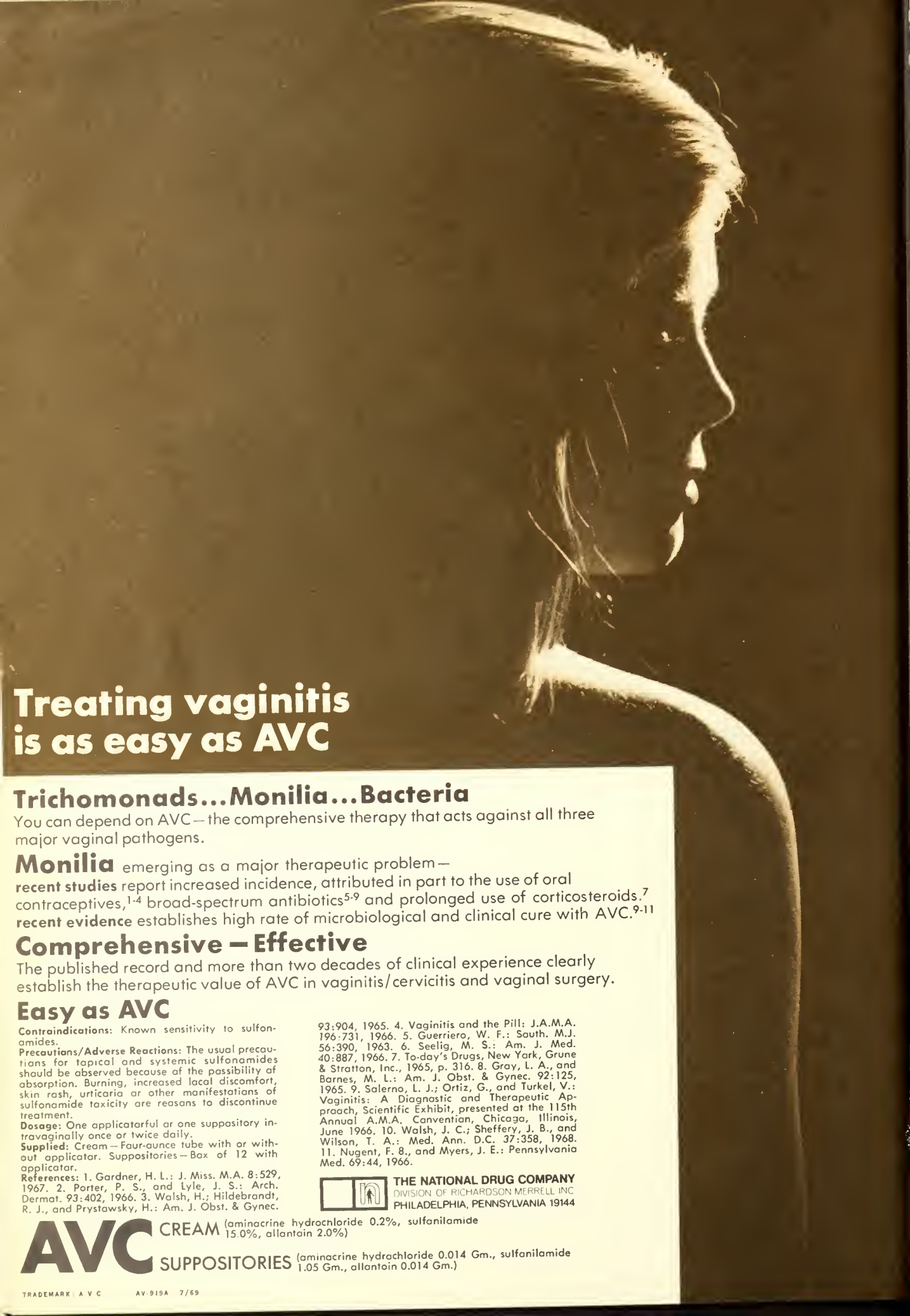
Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.

Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.

Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 4/69 0-821A



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive—Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystawsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantain 2.0%)

AVC SUPPOSITORIES (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.014 Gm.)

TRADEMARK | A V C

AV-919A 7/69

(Continued from Page 24)

France's Uncrowned Queen

MADAME DE MAINTENON (Uncrowned Queen of France), by Charlotte Haldane, The Bobbs-Merrill Company, Indianapolis and New York, 320 pages, indexed, plus 14 pages of illustrations—$7.50.

One of the most fascinating women out of the pages of history is the second wife of the Sun King, Louis XIV. Born an aristocrat, pulled in two different directions from childhood, between Catholic and Huguenot, she spent part of her childhood on Martinique, the Caribbean island that gave birth later to the Empress Josephine.

Miss Haldane, whose effortless prose pictured another Queen (Marguerite of Valois, France's Queen of Hearts) and another Empress (the last great Empress of China) in earlier books that made the best seller list, has scored again with this absorbing biography.—W. J. M., Jr.

DOCTORS
Who Play With Fire
(Their Favorite Recipes)

Barbecue—
Marinated Ham Steaks

Combine ½ cup butter or margerine, 4 cups sherry wine, 4 teaspoons powdered cloves, ½ cup dry mustard, ½ cup brown sugar, 4 teaspoons paprika, 8 cloves garlic finely chopped or equivalent instant powdered garlic.

Marinate 6 one-inch center cut ham slices in this mixture for two hours, turning once. Broil 30 to 40 minutes, turning frequently and basting with marinade. (Save excess marinade in refrigerator for weeks).

Serve ham steaks with escalloped potatoes made with powdered curry to taste and mushroom soup (undiluted) instead of milk, and broccoli with hollandaise sauce.

—John R. Morris, M. D.
Anniston

VA HOSPITAL,

MONTGOMERY, ALABAMA

ORDER NO. 1874

DATED MAY 21, 1970

WANTED: Physician, Urologist or Orthopedist, in Surgical Service of 253 bed GM&S VA Hospital. Salary based on qualification and experience. An equal opportunity employer. Reply to F. S. Apringall, M. D., Chief, Surgical Service, VA Hospital, Montgomery, Alabama 36109. Tel.: Area Code 205, 272-4670.

$30,000.00 guaranteed first year. General Practices in Alabama and Texas. Not an employment agency. Little or no practice expense the first year. City and small town locations. Maximum leisure time. Sanford Smith, P. O. Box 9836, Houston, Texas 77015, 713-453-5454.

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Volume 40 July, 1970 No. 1

Histoplasmosis Of The Tongue Presenting As Carcinoma

Malcolm D. McAuley, M. D.

Birmingham, Alabama

Introduction

Histoplasmosis was first described by Darling of Panama in 1906. The agent (Histoplasma capsulatum) was identified and named by Dr. Rocha Lima of Brazil in 1913.[1] Although many standard textbooks describe histoplasmosis of the tongue, a review of the literature and experience of the author indicate this to be an uncommon lesion. The following case is of interest because in a debilitated patient an ulcerated lesion of the tongue is carcinoma until proven otherwise. This is a report of diagnosis, histopathology, and treatment of histoplasmosis of the tongue.

Classification and Clinical Manifestations

Histoplasmosis usually occurs as a benign self-limited pulmonary disease. The source of human infection is from contact with soil contaminated by fowl. The spores in the soil are inhaled and invade the reticuloendothelial system. The incubation period is one to two weeks. The infection is then spread by lymphatics and blood.[2,3]

The disease can be an acute benign pulmonary infection or a severe disseminated infection of the entire reticuloendothelial systems. In addition to the above types, there is a chronic localized infection with two main clinical types: (1) Pulmonary, in which the patient may be entirely asymptomatic or have a chronic cough, and in which roentgenograms may show either isolated granulomas or lesions progressing to cavitations.[4] (2) Mucocutaneous lesions present as ulcers of the tongue, mouth, pharynx, larynx and gums. These types are found almost exclusively in adults and may or may not be associated with pulmonary or systemic involvement.

The most definitive diagnosis of mucocutaneous histoplasmosis is, of course, by culture of the organism and demonstration of intracellular Histoplasma capsulatum in a biopsy of the lesion itself. In lieu of such demonstration of the organism, the diagnosis may be suspected upon finding miliary calcifications of the lungs by roentgenogram or a rising complement fixation titer to histoplasma antigen. The skin test is of little diagnostic value.[5]

Case Report

The patient was a 77-year-old male, a retired laborer, who has lived all of his life in Birmingham, Alabama. He lived in the city and used city water and sewerage facilities. He presented to the ENT clinic on April 11, 1969 with a history of a sore painful tongue and a ten pound weight loss over the past month. He was referred by an Otolaryn-

Dr. McAuley is a fourth year resident in Otolaryngology at the University of Alabama School of Medicine.

gologist with the tentative diagnosis of carcinoma of the tongue.

In January 1969 he had a "flu-like" syndrome and continued to have a very slight nonproductive cough. His only known exposure to fowl was ten years ago when he collected eggs for four months.

Physical examination revealed a thin elderly colored male whose blood pressure was 144/86, pulse rate 84 and regular, temperature 99° F, and respiratory rate 18. The patient weighed 122 pounds and was 5′6″ tall. There was an indurated area, measuring 2 cm x 4 cm, on the right lateral surface of the tongue. A central ulceration, measuring 1 cm x 1 cm, was present in the indurated area. The induration extended to the floor of the mouth. There were no palpable nodes in the neck. Auscultation of the chest revealed rales in both bases that cleared with coughing. The heart rhythm was regular with no murmurs. There was no hepatosplenomegaly cyanosis, clubbing or edema, and no skin lesions were noted. (Fig. 1)

Fig. 1: Ulcer of the tongue prior to treatment.

The hematocrit was 36 per cent and the white blood cell count was 7700 with normal differential and platelet count. The corrected sedimentation rate was 15 mm per hour; the blood urea nitrogen 21 mg per cent; fasting blood sugar 144 mg per cent, and total protein was 6.15 gm per cent, with albumin 2.9 gm per cent. Alkaline phosphatase was 91 INT units. The VDRL was 4+ and the FTA-ABS was positive. Dark field examination of the tongue lesion was negative. Chest X-ray revealed an infiltrate in the right upper lobe with an air-fluid level. There were "nodules and micronodules," some of which had calcification in both lungs.

A biopsy of the lesion histologically revealed a chronic granulomatous inflammation with no evidence of neoplasm. Gomori silver methenamine stains of the inflammatory tissue revealed small budding yeast-like organisms compatible with Histoplasma capsulatum. Cultures of the blood, urine, and bone marrow were negative; however sputum cultures were positive for Histoplasma capsulatum. (Fig. 2)

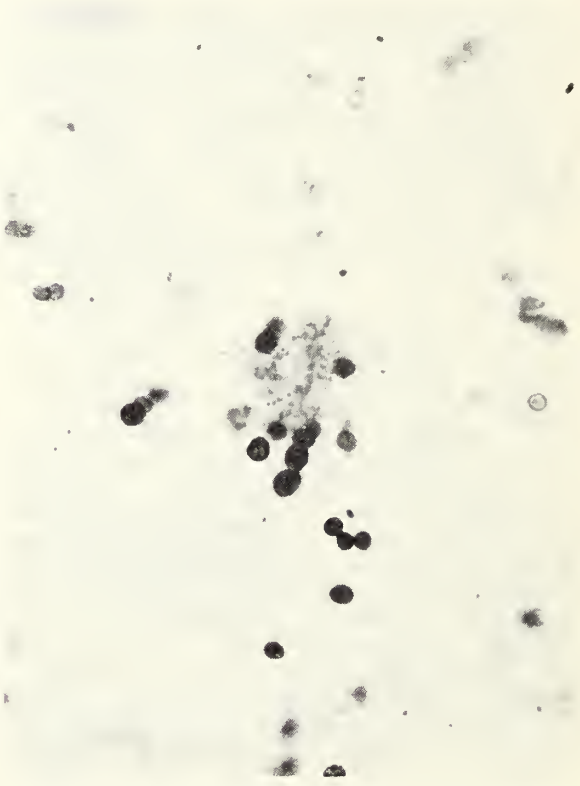


Fig. 2: Magnification 500x. Small budding yeast-like organisms compatible with Histoplasma capsulatum found in the biopsy material (Gomori silver methenamine).

The histoplasma skin test and PPD (intermediate and 2nd strength) were negative, but on multiple complement fixation tests showed a rising titer. Because of the patient's

positive VDRL he was treated with one million units of aqueous penicillin daily for ten days. On April 30, 1969 Amphotericin B therapy was started. The initial dose was five mg diluted in 500 cc of 5 per cent dextrose and water, given intravenously over a six hour period. One thousand units of aqueous heparin was added to each bottle of fluid. The patient was given benadryl (50 mg), aspirin (600 mg), and compazine (10 mg) orally one hour before each infusion. He tolerated the initial dose well and subsequent doses were increased by five mg until 25 mg was being given daily. The method of administration was then changed to 50 mg every day. After three weeks of therapy the tongue ulceration and induration had completely cleared. During therapy the BUN ranged from 21 mg to 55 mg per cent, creatinine from 1.3 to 2.6 mg per cent, and the hematocrit decreased from 26 to 28 per cent. The total dose of Amphotericin B was 1525 mg given over a three month period. His pulmonary lesions had also cleared radiographically at the end of this time. (Fig. 3)

Fig. 3: Complete clearing of ulcer of tongue after three weeks of Amphotericin B.

Discussion

Histoplasmosis is endemic in the Birmingham, Alabama area. Even though this patient gave no history of direct contact with fowl, he had been associated with farming and yard work all of his life.

A history of gardening suggests exposure to bird manure and should be included in the line of questioning in taking a history. We believe that the URI and cough probably represented the initial infection. It is of interest that the skin test for histoplasma was negative despite positive cultures and histopathology. The drug of choice at this time for the treatment of histoplasmosis is Amphotericin B. The antibiotic is derived from a species of Streptomyces.

The administration of the drug may be accompanied by chills, fever, anorexia, vomiting, phlebitis, anemia, hypokalemia and dose related renal damage. A mild anemia develops in all patients during therapy, and it is caused by bone marrow suppression, which is ordinarily reversible after therapy. Azotemia, the main toxic effect of therapy, is found in 80 per cent of patients. This associated effect involves the convoluted tubules and glomeruli and may result in nephrocalcinosis.[6,7] Renal biopsies show amorphous material containing calcium and phosphorus in the convoluted tubules. The renal damage is dose related and may be progressive for two years after therapy. With a total dose below two gm, the renal damage is negligible, but often becomes severe and life threatening above six gm. The usual dose is between two and four gm. The patients are followed with BUNs and Creatinines, but the most useful test of renal function while on therapy is the Creatinine clearance. Mild electrolyte disturbances, hypokalemia and hypomagnesemia can develop during therapy.[8,9]

Technique of Administration

The initial dose is usually five to ten mg diluted in 500 cc of five per cent dextrose and water, given over four to six hours. The dose is gradually increased by five to ten mg daily or every other day to reach a maximum daily dose of approximately 35 to 50 mg, but should never exceed one milligram per kilogram per day. The total dose given is related to the severity of the disease, but is usually between two and two and one half

gm given over a four to five month period. Antihistamines, antiemetics, and aspirin given one hour prior to therapy appear to lessen the side effects. A thousand units of aqueous heparin is usually added to each bottle to prevent phlebitis.[10]

Acknowledgment: The author wishes to thank Dr. John Stram and Dr. Robert N. McGrew for their advice, supervision, and assistance with this report.

Synopsis-Abstract

Proven histoplasmosis of the tongue in a 77-year-old man cleared promptly with Amphotericin B. therapy. A brief discussion of the disease and treatment is presented.

It is important to note that all indurated and ulcerated lesions are not carcinoma. This emphasizes the value of a good physical examination including chest studies and appropriate blood studies before labeling a patient as having carcinoma.

REFERENCES

1. Giles, H. V., and Del Plata, M.: Local Histoplasmosis—Buccolingual. Oral Surgery 25:167-170, 1968.

2. Christie, A.: The Disease Spectrum of Histoplasmosis. Ann. Int. Med. 49:544-555, 1958.

3. Boden, R. A.: Disseminated Histoplasmosis with an Oral Lesion, Report of a Case. Oral Surgery 23:549-556, 1967.

4. Harrison, T. R., Adams, R. D., Bennett, F. L., Resnik, W. H., Thorn, G. W., and Wintrobe, M. M.: Principles of Internal Medicine, 5th Ed., McGraw-Hill, New York, pp 1657-1658, 1966.

5. Hoke, A. W.: Histoplasmosis of the Tongue. Arch. Derm. 94: 667-670, 1966.

6. Bell, N. W., Andriole, V. T., Sabesin, S. M., and Utz, J. P.: On the Nephrotoxicity of Amphotericin B in Man. Am. J. Med. 33:64-69, 1962.

7. Butler, W. T., Bennett, J. E., Alling, D. W., Werlake, P. T., Utz, J. P., and Hill, G. J.: Nephrotoxicity of Amphotericin B—Early and Late Effects in 81 Patients. Ann. Int. Med. 61:175-187, 1964.

8. McChesney, J. A., and Marquardt, J. R.: Hypokalemic Paralysis Induced by Amphotericin B. JAMA 189:1029-1031, 1964.

9. Utz, J. P., Bennett, J. E., Brandriss, M. W., and Hill, G. B.: Amphotericin B Toxicity: Combined Clinical Staff Conference Nat'l Inst. Health. Ann. Int. Med. 61:334-354, 1963.

10. Einstein, Hans E.: Current Therapy. W. B. Saunders, Philadelphia, p 118, 1969.

The Pulmonary Alveolus, How It Works And What Affects It

D. S. Tysinger, Jr., M. D.
Dothan, Alabama

Before proceeding to the final article, "pH, Blood Gases, and Diffusion", it has been made apparent that further explanation of alveolar elasticity should be presented for a complete understanding of what happens. Since this digression into alveolar elasticity will be made, it will be discussed in considerable detail.

Over the past 20 years much has been learned about lung elasticity. The following is an attempt at a simple presentation to give sufficient understanding of the alveolar area and the way it works. In the late 1950's and early 1960's a substance referred to as surfactant was found which has detergent-like properties and, when present, controls the elasticity at the alveolar level. To understand this peculiar segment of lung elasticity it is necessary to relate it to total lung elasticity.

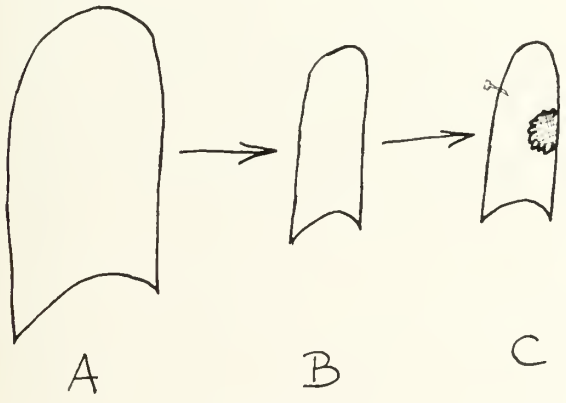


Diagram 1

In Diagram One, reproduced from Article One, is presented a diagram of the lungs at full inspiration (A), at full expiration (B), and then with a needle in the chest wall, allowing the total lung to collapse in a fist-sized ball around the hilus (C). If the bronchial structures were not also elastic then they would not collapse as pictured. Therefore, to collapse to this level the bronchial structures as well as the alveolar area must have a degree of elasticity sufficient to allow collapse to this small size. The same lung elements found in the fully expanded lung at A are still present in the fully collapsed lung at C. The only reductions are in the amount of air, blood, and lymph that may be present in the organ. Therefore, one must consider all parts of the lung as having strong elastic properties.

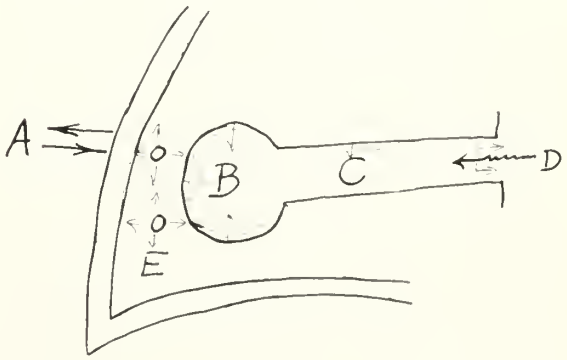


Diagram 2

Diagram Two, reproduced from Article One, is a diagram of one bronchus, one alveolus within the chest cage and the diaphragm with the interstitial tissue around it. The force of the chest cage and diaphragm is referred to as Force A which is a voluntarily controlled muscular force that can be used to expand or to collapse. Next is the Alveolar area which is called Force B. Due to the surfactant substance lining the alveoli, this area is also elastic and tends constantly to move towards collapse while being stretched and dilated by the opposing force of the chest cage and diaphragm. Force C is the bronchiolar force which is always tending

to become shorter and collapse but which is held in check, elongated and dilated on inspiration, by the same chest cage and diaphragm. Also, as a resistant force (Force D) there is the air flow through the tubes with its viscous resistance between the air and the tube wall which is dependent on the pressure difference at the mouth and in the alveolus, this pressure being produced by the chest cage and diaphragm. It is dependent on the rate at which air flows and the amount of difficulty along the bronchial tube. Since Forces B and C are always collapsing forces and A may be either expanding or collapsing and always holding the lungs in their position whether at full expiration or normal expiration; then there is a tug-of-war between Forces B and C and Force A which due to the two opposite reactions produces a negative pressure in Area E. This negative pressure to a certain extent is determined by the surface tension of Area B and is the interstitial pressure which keeps the alveolus open. Paschal's Law states that a gas at rest has equal pressure throughout; therefore, if the individual is at the end of expiration he has the same pressure around him as he has in his alveolus. The pressure keeping the alveolus expanded is not, therefore, the internal pressure of air against the wall but rather the negative interstitial pressure around the alveolus which keeps the alveolus expanded. Thus, there is the alveolar interstitial pressure of minus 5-6 cms. water pressure which tends to keep the alveolar capillary area open. It can be understood that when the alveolar surface tension rises to a point that negative pressure cannot be maintained in the interstitial area due to a lack of need in other areas of the lung, then the alveolus will, due to surface tension, collapse. Another point that must be noted at this time is that the lung does have two blood supplies. The arterial blood supply comes from the aorta through the bronchial arteries. These supply all the non-aerated tissues of the lung including the vaso-vasorum of the pulmonary artery. They are quite small and are incapable of maintaining blood supply for the whole lung in any situation. In instances of vascular abnormality, they may be larger. Therefore, the alveolar capillary area is in no way supplied nourishment or oxygen by the bronchial arteries. The pulmonary artery which comes from the right heart, on the other hand, is completely arterial except for its content of carbon dioxide and oxygen. Therefore, the necessities can be supplied via the pulmonary artery which becomes arterial at the alveolar capillary bed. Indeed circulation at this area has been noted to go forward and flow backward for periods of time up to as long as two minutes depending on the circumstances. Through the stasis, forward and backward flow, and from the oxygen delivered from the alveolus itself, the alveolar capillary area is nourished.

The area to be discussed here is that of the alveolus and its interstitial surroundings. Therefore, the anatomy of the alveolus should be discussed. First should be remembered that measurements are quite important at this point. As a review, one mm. equals 1,000 microns; one micron equals 10,000 angstrom units. The measurements of the alveolus are expressed in angstroms. There is noticed in the normal alveolus facing the alveolar air a roughly 50 angstrom thick layer which is purported to have the surface activity that is spoken of as surfactant. Just under this is a jelly or slime layer that varies from 200-2000 angstroms in thickness. Under this is the cell membrane layer which varies from 400-650 angstroms. Beneath this is a basement membrane which is roughly 1100-1600 angstroms. Then there is the capillary wall which will vary from 200-4000 angstroms. This will give an average total thickness between the air and the alveolar capillary lumen of 1.0 microns.

Alveolar elasticity has been attributed primarily to surface tension and its modification. First, surface tension should be understood. Everything is made up of molecules or atoms. These smallest units of a substance or an element are quite small. They have unusual properties the first of which is the continual movement due to kinetic

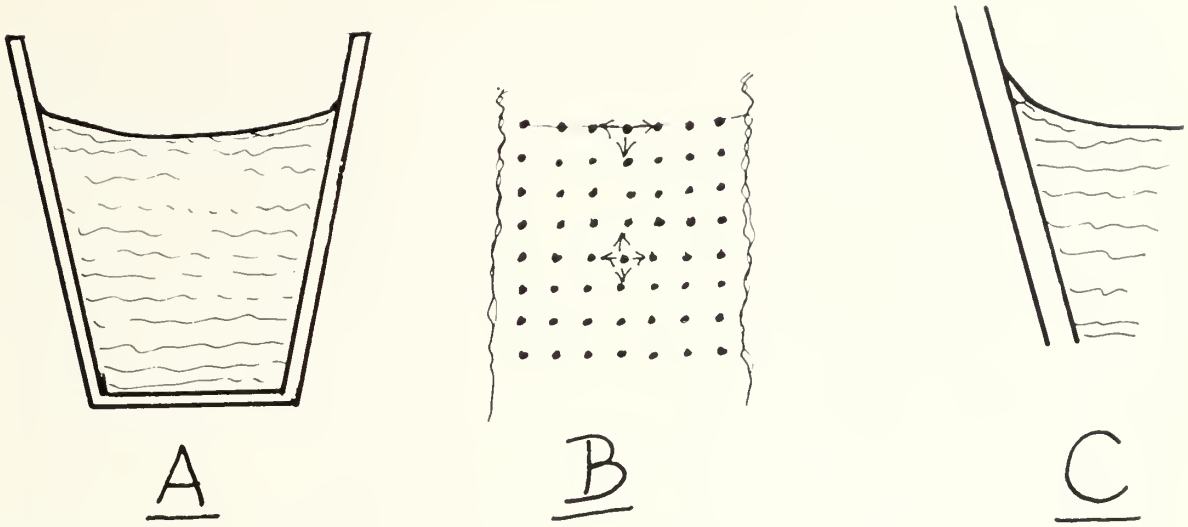


Diagram 19

energy. As a substance is heated the energy from the heat is transferred to the molecules as increased kinetic energy and the frequency of collisions is greater but also there is greater distance between the high energy molecules. This causes an increase in pressure and decrease in density with heating. This can best be demonstrated by taking, for example, iron filings of under 0.2 microns and putting them in a watery solution and looking at them under the microscope. The particles will be in a continuous shaking motion. This is known as Brownian movement and is due to molecular collisions which are sufficient to cause the small iron filings to move. These molecules and atoms, whichever is being dealt with, also have other properties.

A property of mutual attraction of atoms of the same element, or molecules of a like substance is known as cohesive force. The cohesive forces are molecular attractions for each other and are likewise inversely dependent on heat. The hotter the substance the lower the cohesive forces. The cooler the substance the higher the cohesive forces. Since these molecules are evenly distributed throughout a solution then they are attracting in all directions. The other force is known as the adhesive force. This is the attraction of one type of molecule for another molecule or a different substance. Heat increases this force. The adhesive and cohesive forces of a substance determine the viscosity of the substance and these two forces are responsible along with the kinetic energy for the surface tension.

In Diagram 19 A there is a container with water in it. It is noticed that at the junction of the water and air at the top of the container there is a sagging, or concave curve of the surface of the water which is called a meniscus. This meniscus is due to surface tension. If a very small portion of the surface is taken so it can be magnified to see the molecules and demonstrated as at B there will be noticed that the molecules within the liquid are pulled equally in all directions whereas the molecules on the surface only have forces acting from 0-180° downward. From 180-360° above, there is only air so that the pull is not in all directions but is only sideways and down. Therefore, the surface molecules tend to be pulled down toward the rest of the liquid. Also, due to the adhesive forces of the substance where the meniscus contacts the wall of the container there is a sharp increase angle up the side as at C. Thus, the adhesive and the cohesive forces cause this meniscus to occur.

One thing to remember is that these mole-

cules are always in motion. The surface molecules then would rise to the surface and tend to come right back down into the liquid. Thus there can be pictured a constant flow of water molecules to the surface and back down. As a result of this effect where air and water meet (air-water interface), there is surface tension which is measured in dynes per cubic centimeter. For water at body temperature the surface tension is 70 dynes/ cm^2. For the purpose of definition, 980 dynes per centimeter square is equal to one gm. of water pressure; one gram of water pressure is equal to one centimeter of water pressure.

With the understanding of surface tension let us go a step further to the physiological Law of Leplace. If instead of a glass with a meniscus a soda straw is put into the water and a bubble blown up in the water, it will be noticed that it takes much more pressure to start the bubble and to hold a small bubble than it will to maintain a bubble as the bubble gets progressively larger. The larger the bubble gets the less will be the pressure necessary to maintain the bubble size. This is, despite the fact that the surface tension of the water for the very small bubble is 70 dynes per centimeter square, the same as that for the large bubble. This has been mathematically represented by the physiological Law of Leplace which states that pressure (the formula is given at B in Diagram 20) is equal to two times the surface tension divided by the radius of the bubble. A bubble that is 50 microns will have a radius of 25 microns. (For the simplicity of this paper the steps in the equation of Dynes/$cm.^2$=980 to obtain grams of water pressure and cms. H_2O pressure will be omitted. Instead of 980 dynes, 1000 dynes will be considered 1 cm. H_2O pressure.) Therefore the formula for this would be the pressure equals two times 70 divided by 25 which would come out 56 cms. of water pressure to hold the bubble open. (C of Diagram 20) If the bubble size is increased to 300 microns as at D, this would be 150 micron diameter. The surface tension is still the same which would be two times 70 divided by 150 which would come out 9.3 cms. of water pressure. (D of Diagram 20) This is

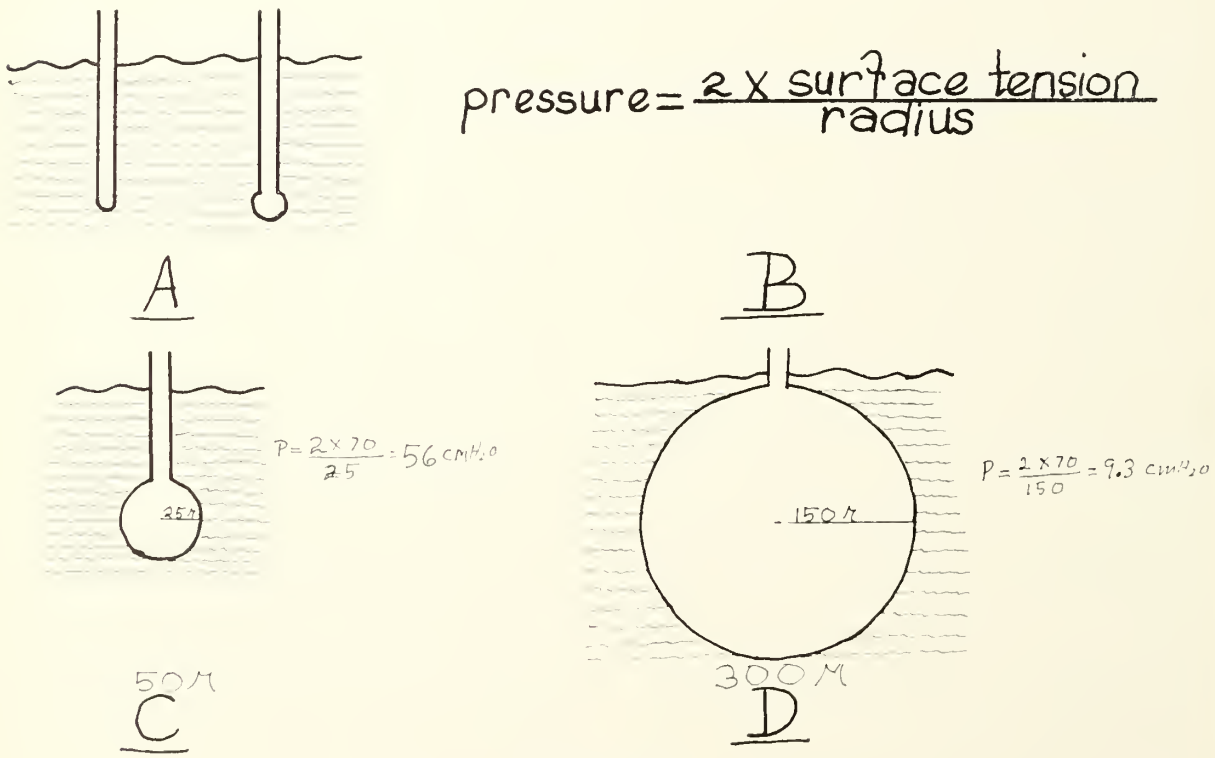


Diagram 20

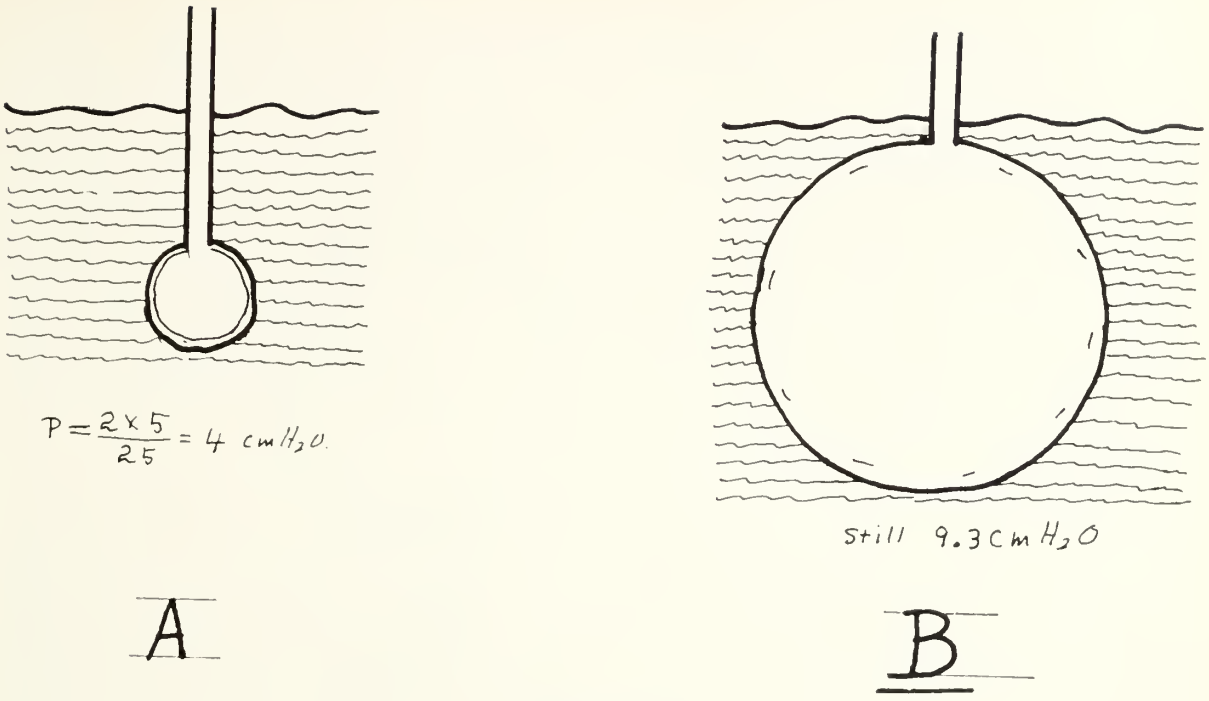


Diagram 21

the way surface tension acts in bubble form.

Detergents are substances that lower surface tension. If the 50 micron bubble is lined with a detergent that reduces the surface tension to five dynes and there is a sufficiently small layer so that it barely covers the bubble surface, then the pressure that will maintain this bubble is two times five divided by 25 which comes out four cms. of water pressure (Diagram 21) rather than the 56 cms. H_2O pressure when the surface tension was not compromised by detergent. If the amount of detergent surface active material is not increased and the bubble is stretched to 300 microns then there is not sufficient substance present to influence the bubble and it still takes 9.3 cms. of water pressure to hold this bubble open. This effect of surface active substance to change the surface tension of the small bubble and not affect the large is known as hysteresis.

At the pulmonary alveolar level there are several substances that may be present. First, the slime layer is primarily tissue fluid which has a surface tension of about 53 dynes per square centimeter. Other fluids that may get into and affect the alveolus are plasma, which has a surface tension of 73 dynes per square centimeter, and whole blood which has a surface tension of 58 dynes per square centimeter. The jelly slime layer, which has a surface tension of 53 dynes per square centimeter, also has a bronchial tube and a double-layered surface because each side of the slime layer exhibits surface tension. (Diagram 22) This situation is in contrast to the more simple soda straw and liquid analogy. Thus, the formula of Leplace must be modified since there are now two surface tension layers compressing or four times the surface tension divided by the radius. Alveoli fluctuate in size and vary considerably from the infantile state where they are quite small, 10-20 microns, to the older adult where they might be 300 microns. As an example, consider the surface tension of an alveolus that fluctuates from ten microns on expiration to 100 microns on inspiration. There is a double-layered bubble with the modified formula for the Law of Leplace. In the formula (A and B bubble) with alveoli of ten micron size there is a five micron radius. Due to the double layer of the bubble

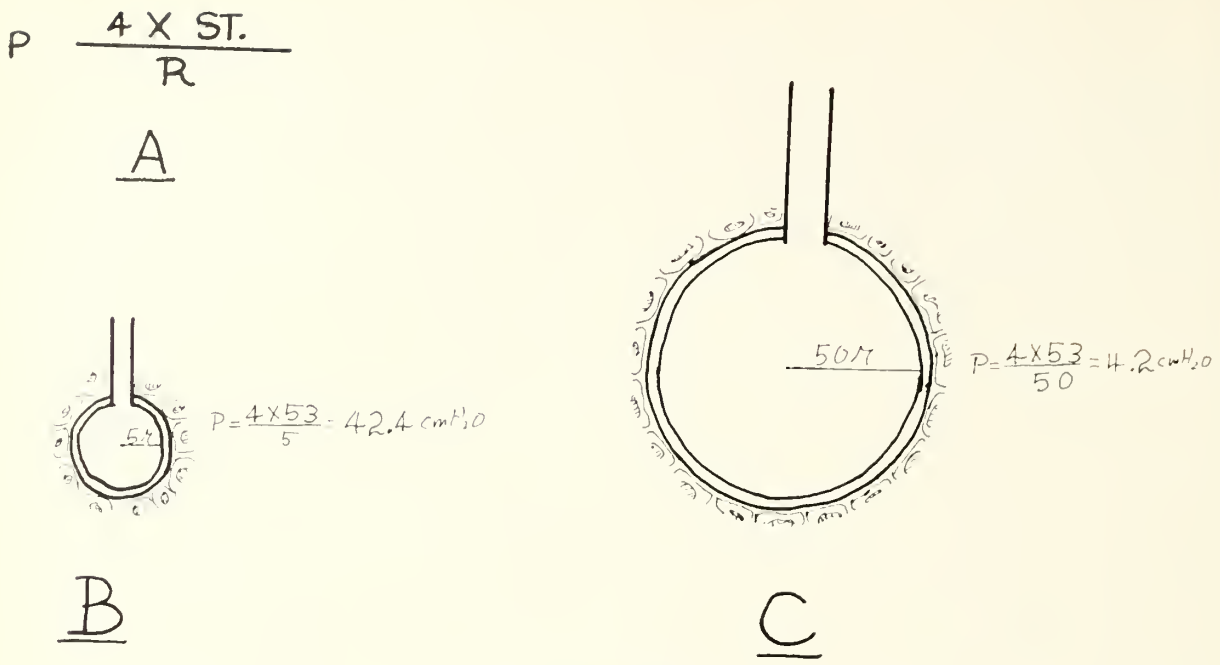


Diagram 22

a pressure of 42.4 cms. of water is required to keep this bubble open. As alveolar diameter is increased to 100 microns with a 50 micron radius (C) the pressure is reduced to 4.2 cms. of water to keep the bubble open.

In the lungs the body produces a substance like the detergent put in the water bubble which is referred to as surfactant. Cells in each alveolus apparently synthesize this from the precursors in the blood stream. This material, which is deposited on the surface, reduces the surface tension to about five dynes per square cm. at the end of expiration. Diagram 23 shows that when the pressure keeps the alveolus stretched to the 100 micron level, the amount of surface active substance per surface unit is so small that it is essentially ineffective and surface tension is not reduced. At full inspiration, then, there is sufficient surface tension to cause alveolar reduction in size. As the alveolus again reduces in size the substance which causes a detergent-like effect lowers the surface tension to five dynes per centimeter and thus there is a fluctuation in surface tension from roughly five dynes on expiration to about 53 dynes in this case on inspiration. In review it is interesting to note that the pressure to keep this bubble open does not vary a great deal due to this hysteresis effect of the substance on the alveolar surface area.

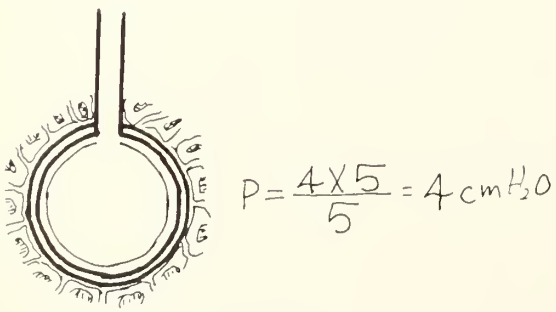


Diagram 23

Surfactant, as best it can be defined, is a lipo-protein complex, the lipoid fraction being a phospho-lipid complex primarily dialpalmento lecithin. There is very little known about the protein fraction. This substance is apparently synthesized by the large alveolar cells of which there is an average of 6-7 in each alveolus. They make up a total of about ten per cent of the lung's weight. This substance has peculiar properties. It is not stable. It has a half life from 12-14 hours

and completely disappears and must be reproduced every 18 hours. Its production is by the aerobic metabolic route with the need for both glucose and oxygen for its production. To maintain production the alveolus must change in size or the cells quit producing. As long as this substance is being produced normally as fast as it is destroyed, the lungs exhibit normal hysteresis and the lungs are spoken of as being compliant. If for any reason this substance is denatured, not produced, or destroyed, then the lungs become stiff and are spoken of as noncompliant.

Much has been learned about this substance and what affects it. As previously mentioned, sufficient oxygen and glucose for cell metabolism along with correct pH for adequate cell function are the first requirement. The second is sufficient precursors in the blood stream from a diet adequate in precursors. It is known that in the fasting individual, surfactant activity begins to decrease in its effectiveness in two-four days and, when it is decreased, it takes two-four days to build back upon a good diet. In such conditions as anorexia nervosa and neurotic starvation conditions where this is demonstrated clinically, there is a fall in surface active substance in the individual which can be corrected by the intake of a proper diet. Where the blood supply is adequate and under normal pressures there is no difficulty; however, as blood supply is compromised either from left heart failure and back pressure, primary pulmonary hypertension, general hypertension with a reduction in alveolar capillary circulation, there is a progressive fall.

It has been noted that, in situations such as mitral stenosis and insufficiency and other heart diseases with the reduced blood flow, there is a reduction in demonstrable surface active material. When an individual is put on pump by-pass, in fairly short order there is a drop to essentially zero of surface active substances due to the lack of pulmonary artery circulation and on recirculation and reventilation the development of what has come to be known as "perfusion lung syndrome" develops. When area ventilation is accomplished by the unphysiological volume cycles respirators that depend on mechanical psying devices that are generally poor, there is resulting diminution of surface active material with alveolar collapse and A-V shunting of blood past these alveoli.

In the individual who smokes, is healthy, and is completely asymptomatic, lung washings have shown that there is a marked decrease to almost complete loss of any evidence of surface active material. There is a large production of alveolar phagocytes loaded with multiple variable sized granules which make up about 93 per cent of the cells obtained by this method. The normal healthy individual who does not smoke shows a white layer that is quite surface active and also a brown layer in which cells are 50-60 per cent phagocytes and may or may not contain granules.

The war gases, the oxides of nitrogen and sulfur (particularly with acute toxicity) do apparently have considerable effect on the lung, more on the ciliary mucous escalator and more on the alveolar capillary where they do cause an increased capillary permeability with an increased effusion of plasma into the alveolar area. They do not have a direct effect on surface active substance itself; however, they probably do interfere with the oxidative processes of the producing cells which would in effect produce a decrease. In air pollution, as well as in smoking, particulate matter is known to cause an increase of mucous secretion up and down the traceobronchial tree. Also, there is an increase in phagocytic activity and the number of phagocytes in the alveolar area and. thus, particulate matter does end up being quite detrimental. Dry gases are known to dry out the bronchial tubes if given sufficient time and, on arriving at the alveolus dry, will denature surfactant. The effect of oxygen, wet or dry, on the alveolar area does cause a denaturation of the surfactant. In addition oxygen is one of the causes of hilar membrane disease. Of the inhalation medications the only ones that really seem

to have a detrimental effect is that of water itself and hypertonic saline which denature the surfactant. Using present inhalation equipment tremendous amounts of water can be given, particularly with those machines that put out such extremely small particle size as to reach the alveolus. It is not surprising that alveolar atelectasis is seen secondary to massive water overdosage in attempts to moisten the upper and lower airway secretion. Equipment used to deliver moisture to the lungs for such purposes should not produce many particles under 0.2 micron as well as not many large ones over five microns.

The situations that occur with disease along the bronchial tube and obstructive disease can be pictured easily. With these diseases, in which the dispersal of air is difficult and in which pressures are increased in an effort to expel air, then the general interstitial pressure within the lungs goes up until expiration size is reached at which point the more normal alveoli, frequently having been subjected to this increased interstitial pressure, have not remained open. On the following inspiratory breath the lungs attempt to increase this area. It is harder and takes a greater negative pressure to ventilate the obstructed area so that an increased negative pressure is demanded in an effort to fill obstructed airways and to open airways that collapsed during the previous forced expiration. This deleterious situation causes difficulties in ventilation. As this process develops, the patient gets frantic. Pressure extremes are developed both positive and negative to a point at which there is plasma escaping into the alveolus during inspiration and this gives a much higher surface tension than does the normal tissue fluid and helps alveolar collapse during expiration. This causes a severe "tight lung" situation. Likewise, behind obstructed areas, there are produced areas of poor ventilation where oxygen saturation falls. As oxygen saturations fall locally there is a decrease in the alveolar cell's ability to replenish the surfactant-like material. Once again, there is alveolar collapse secondary to a surfactant loss. Needless to say, pump by-pass situations in which all of the pulmonary artery circulation is taken out of the right atrium and returned to the aorta rapidly produces a massive physiologically abnormal destruction of alveolar surfactant with the production of the typical "perfusion lung syndrome." This can only be prevented by adequate circulation with oxygenated blood of the pulmonary artery during pump by-pass.

Finally, alveolar size differs throughout the lung. Those alveoli next to the diaphragm and anterolateral chest wall are the largest; those posterior-apical being much smaller, and those in and among the bronchial tubes in the inner and middle part of the lungs being the smallest. Here, then is a situation whereby there is a constant variation in tension, the smaller alveoli having the greater pressure in relation to the larger thus emptying faster which causes an interpulmonary flow of gases in the normal, from the inner to the peripheral at the end of expiration and with flow reversal as breathing occurs, thus making use of turbulence in the alveolar areas as much as possible during the entire cycle of breathing.

What can be done to protect the alveolar area? Adequate diet and adequate blood flow are a must. Cessation of smoking and separation from air pollution as much as possible is needed. The avoidance of those situations and materials that cause the denaturation of surfactant such as high oxygen concentrations (wet or dry), humidity with too small a particle size that would collect in the alveolus rather than along the tracheobronchial tree, and periodic distension of the lung, the so-called mechanical psying of the lung done sufficiently to cause expansion of the tracheobronchial tree. Blow bottles which are used for expiratory muscle training and purse lip breathing training produces a back pressure sufficient to cause collapsed alveoli to pop open. Regional ventilation should likewise be prevented. Regional ventilation is seen in the individual who does not move, who has had a stroke

and is in bed, the individual with the pneumothorax who is not breathing completely on both sides, the individual with obstructive lung disease, pneumonic processes, etc. It has been shown that in pulmonary emboli, pulmonary infarction, pneumonia, hilar membrane disease, etc., surface active substances are destroyed.

For the presurgical and surgical patient, the individual who smokes should quit smoking at least four days to a week before surgery. During this time he should have an adequate diet. Also during this time IPPB with blow bottles is most effective in stimulating the reproduction of surface active material. It takes at least four days to do this successfully. The individual who has been on IV fluids for a period should, where possible, be fed with a stomach tube if he cannot take food by mouth in order to replace dietary necessities. Individuals who have had extensive oxygen inhalation for any period should be monitored closely as to blood gases and changed to compressed air with proper measures being taken for lung distension at periodic intervals. All individuals with chronic lung disease, needless to say, should be as free of sputum as possible and in as good a shape as possible before going to surgery. All smokers, chronic lung patients, and patients who are having abdominal surgery should be taught abdominal breathing and cough exercises before surgery. It should be explained in great detail the necessity for breathing quite deep, the reason for the mechanical psying by holding the machine on for 30 seconds every fourth breath during the IPPB treatments, and the reasons for humidity. If these precautions are taken, the respiratory difficulties should be very small.

In the anesthetic suite the individual should be given moist anesthesic gases. When this is not done, approximately 0.044 cc. of moisture are removed from the lungs per liter of gas given which dehydrates. The longer the procedure the more the lungs are dehydrated. Therefore, as soon as the patient is off the anesthesia machine he should be put on moisture, but the moisture must be of sufficient particle size not to rain out in the alveolus (that is, above 0.2 microns in particle size). This should be given for a period up to 24-48 hours. As soon as possible the patient should be started on IPPB preferably with 20 per cent Ethanol and Racemic Epinephrine. This can be given as frequently as every hour, particularly in the pump by-pass patient. While this is being done, about every fourth breath the machine should be held on for 30-35 seconds to fully distend the lungs.

If in the treatment program of the patient one continually mistreats the alveolar area, then there will be progressive alveolar collapse with an increasing pulmonary A-V shunt which is demonstrated by a falling oxygen concentration in face of a fairly normal pH and PCO_2 or low pH and high PCO_2 if this is severe. The degree of shunt can be alleviated by giving the patient O_2 for a 15-minute period with a respirator. Then an arterial blood is drawn. If there is no shunting or diffusion difficulty at this point, O_2 will be around 550 mmHg. During the recovery period this may be repeated. The amount below this 550 mmHg. oxygen pressure that is obtained with the 15-minute period treatment will give a gross evaluation of the per cent of shunting taking place. In doing this procedure speed is of the utmost importance. The blood with this high an oxygen concentration, even though tightly sealed after collection, will tend, due to the high oxygen pressure, to lose oxygen up to 30 mmHg. a minute until it gets down to about 300 mmHg. where it will continue to lose but at a slower rate. The exact rate of loss is hard to determine; therefore, if this test is to be used it should be used with this in mind.

"We Are Rightfully Indignant"

On March 7, 1970, the following letter was sent to each of our Senators and Congressmen:

"The physicians in the Texas Medical Association urgently seek your influence in defense of an honorable profession that has been unjustly maligned, criticized, and attacked in recent months for the financial failures of the Medicare and Medicaid programs.

"The faults of these programs were built into them by their designers and it is grossly unfair to expose the medical profession to criticism by implying widespread abuse of the programs, when such abuse, if it exists, involves only a miniscule portion of our profession. The vast majority of physicians are honorably discharging their responsibilities both to their patients and to these programs. We are discouraged and disheartened at the publicity that results from release of such information as the report of the Senate Finance Committee, implying as it does widespread abuse by physicians. If these attacks on our profession continue, the ill people of this country will be the greatest losers.

"We look to our statesmen in Congress to set the record straight, to let it be known they have faith in the medical profession, and to insist that the blame for present difficulties be placed where it rightfully belongs. We earnestly solicit your continued strong support."

Many state medical societies reacted similarly to the stepped-up attacks on the medical profession following the release of the Senate Finance Committee's staff report on the problems besetting Medicare and Medicaid. News releases have been circulated and radio tapes provided.

It is clear that both these programs have inherent defects in them that should be corrected at the Congressional level. Congress has promised more medical care than it can deliver and more than the taxpayer may be willing to pay for. It is not asking too much of this elected body that it recognize the moral wrong in promising such care, asking the providers of services to subsidize it (as they did when fees were frozen more than a year ago), and then blaming these same providers for the soaring costs.

Charles Max Cole, MD, President,
Texas Medical Association.

—*Texas Medicine*

BUREAU OF PREVENTABLE DISEASES

Frederick S. Wolf, M. D., Director

Current Morbidity Statistics

1970

	March	April	*E. E. April
Tuberculosis	97	126	111
Syphilis	23	32	117
Gonorrhea	624	698	319
Chancroid	2	0	1
Typhoid fever	1	1	1
Salmonella	16	17	4
Undulant fever	0	0	0
Shigella	8	8	3
Amebic dysentery	0	0	3
Scarlet fever & strep. throat	503	435	176
Diphtheria	0	0	0
Whooping cough	1	3	4
Meningitis	3	14	6
Tularemia	0	0	0
Tetanus	0	1	1
Poliomyelitis	0	0	0
Encephalitis	0	1	0
Smallpox	0	0	0
Measles	11	1	430
German measles	79	49	17
Chickenpox	164	175	144
Mumps	32	43	91
Infectious hepatitis	19	44	43
Typhus fever	0	0	0
Rocky Mt. spotted fever	0	0	0
Malaria	3	0	0
Cancer	418	439	662
Rheumatic fever	15	7	16
Rheumatic heart	14	19	25
Influenza	2,926	103	376
Pneumonia	610	417	334
Rabies-Human cases	0	0	0
Pos. animal heads	4	4	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

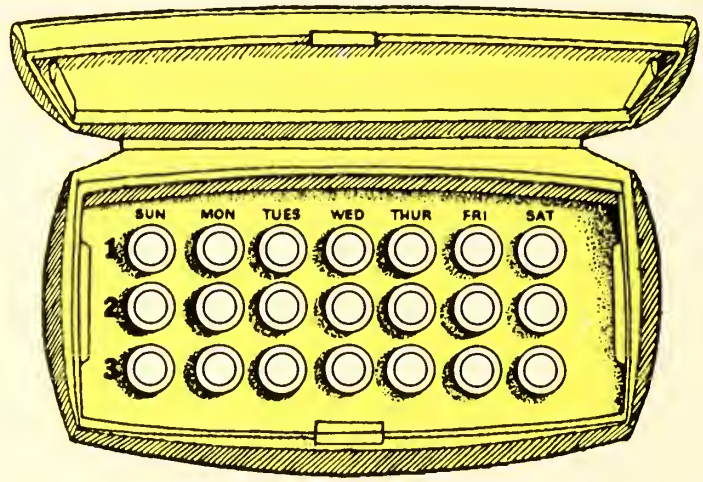
Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

Announcing the half-new pill

Dem

What's new:
50 mcg. ethinyl estradiol

... Demulen offers added assurance in view of today's concern



What isn't:
1 mg. ethynodiol diacetate

... Demulen offers the distinctive Searle progestin proved in millions of women

Demulen—the one oral contraceptive that provides this new combination—offers • A full measure of confidence: Unsurpassed contraceptive effectiveness, and the low estrogen content—50 mcg.—is especially significant today • A full measure of comfort: A low incidence of breakthrough bleeding and other side effects.

Demulen continues the Searle tradition of unmatched convenience. • Sunday starting, cycle after cycle: Three weeks on, one week off. There is no simpler pill-taking schedule. • A package that helps keep her on schedule: The Demulen Compack® tablet dispenser is patient-proof. Day and week of cycle are clearly designated for each tablet.

ulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Actions—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

OA1

SEARLE Where "The Pill" Began

G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

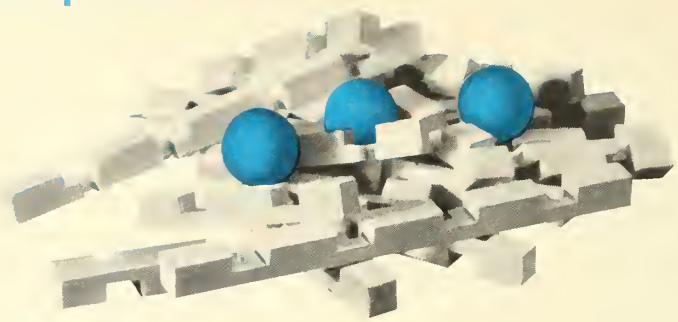
half-new

Dem/ulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

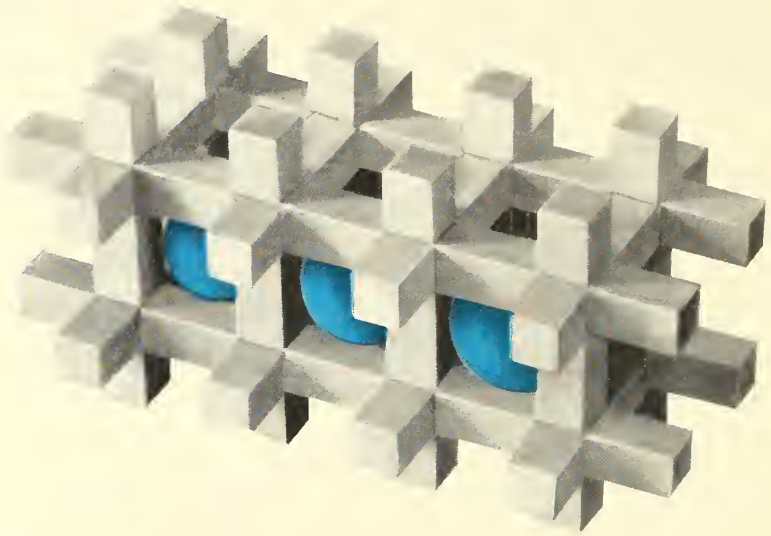
IN G.U. THERAPY

Does not create problems...



SOLVES THEM

WITH FIRST DOSE PAIN RELIEF



Urised is a problem solver; it brings patient comfort with first dose pain relief. Unlike newer antibiotics or sulfonamides, Urised does not create problems. It has a time tested record of minimal side effects. For over 50 years, Urised has created physician and patient confidence by providing effective therapy when needed.

FIRST DOSE PAIN RELIEF

URISED®

For G.U. Frequency – Urgency – Burning

Clinically effective for G.U. Therapy [1-5]

- **CYSTITIS**
- **PYELITIS**
- **TRIGONITIS**
- **URETHRITIS**

Each blue-coated tablet contains these active ingredients:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.3 mg.	Benzoic Acid	4.5 mg.

Contraindications: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

Warnings: Do not exceed recommended dosages.

Precautions: Administer with caution to persons with known idiosyncrasy to atropine and cardiac disease. While under this therapy the urine is blue; patients should be so advised to allay apprehension.

Adverse Reactions: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occurs, decrease dosage. If rapid pulse, dizziness or blurring of vision occurs, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

Dosage and Administration: Adults: Two tablets, orally, four times per day, followed by liberal fluid intake. Older children reduce dosage in proportion to age and weight.

How Supplied: Bottles of 100, 500 and 1,000 tablets.

References: (1) Sands, R.X.: New York St. J. Med. 61:2598-2602, 1961: (2) Renner, M.J., et al: Hosp. Topics 39:71-73, 1961: (3) Haas, Jr., J., and Kay L.L.: Southwest. Med. 42:30-32, 1961 (4) Marshall, W.: Clin. Med. 7:499-502, 1960: (5) Strauss, B.: Clin. Med. 4:307-310, 1957.

CONAL PHARMACEUTICALS, INC.
CHICAGO, ILLINOIS 60640

MANUFACTURERS OF URICEUTICAL® SPECIALTIES

Malpractice Survey

Walker Reynolds, Jr., M. D., F. A. C. S.
Anniston, Alabama

This malpractice survey is a result of a study begun on the national level by the American College of Surgeons and adopted for nationwide distribution through its state chapters. This survey was sent to 355 Fellows of the Alabama Chapter of the American College of Surgeons with 186 replies. The following results are presented as information to the Fellows who participated as well as to the other physicians in the state of Alabama.

1. What is your specialty? (Gen. Surg., Ortho., Thoracic, etc.) _____
2. What is your age? (Circle one) 20 - 30 - 40 - 50 - 60 - 70
3. Is there a malpractice problem in your geographical area? yes no
4. Do you carry malpractice insurance? yes no
5. What is your premium? _____
6. What are the limits of coverage? _____
7. Has your premium increased by more than 100% in the past 5 years? yes no
8. Have you been sued for malpractice? yes no
   Past 10 years 5 years 1 year
9. Did you go to court? yes no
10. Did you or your insurance company settle out of court? yes no
11. Are insurance companies and lawyers, in your opinion, too ready to settle suits out of court irrespective of the validity of the suit? yes no
12. Should a "formal effort" be made to jointly consider this problem with the Bar Association? yes no

13. Should plaintiffs pay court costs when their suit is denied? yes no

14. Have you had difficulty obtaining malpractice insurance or having your insurance cancelled after being involved in a suit? yes no

15. Do you have a solution to the problem or suggestions as to Chapter activity in this regard? Your comments are appreciated.

Question #1 What is your Specialty?

	Sued	Total
General Surgery	32	121
Urology	—	11
Neurosurgery	1	2
Thoracic	2	10
ENT	3	12
EYE	—	—
Orthopedics	2	11
OB/GYN	3	10
Colon-Rectal	—	2
Plastic	1	5
Vascular	1	1
Pediatric	—	1
Total	45	186

Question #2 What is your age?

Years	Total	Percent
30-35	16	9
40	56	30
50	67	36
60	36	19
70	8	4
80	1	1 (.005)
Not Given	2	1
Total	186	100

Age as defendant—

Years	Total	Percent
30	6	13
40	22	49
50	11	24
60	3	7
70	—	
Not Given	3	7
Total	45	100

Question #3 Is there a malpractice problem in your area?

City	Quest. Re't	yes	no	# of Suits
Birmingham	62	37	25	12
Mobile	27	12	15	9
Gadsden	9	3	6	4
Anniston	6	3	3	2
Huntsville	6	5	1	—
Montgomery	22	9	13	5
Tuscaloosa	6	1	5	1
Small Town	48	8	40	12
Total	186	78	108	45

Question ‡7 Has your malpractice insurance permium increased by more than 100% in the past 5 years?

Yes	125	68%
No	25	13%
Don't know	36	19%
Total	186	100%

Question ‡8 Have you been sued for malpractice?

Yes	45	24%
No	141	76%
Total	186	100%

Question ‡8a Years since you were sued.

Specialty	Past	10	5	1	Total
Gen. & Vas.	9	8	14	2	33
G. U.	—	—	—	—	—
Neuro.	1	—	—	—	1
Thoracic	—	1	1	—	2
ENT	—	—	2	1	3
Eye	—	—	—	—	—
Orthoped	—	1	1	—	2
OB/Gyn	—	—	3	—	3
Colon-Rectal	—	—	—	—	—
Plastic	—	1	—	—	1
Total	10	11	21	3	45

Question ‡8b

Years	Total	%
Past	10	22
10	11	24
5	21	47
1	3	7
	45	100

Question ‡9 Did you go to court?

Yes	19	43%
No	22	49%
Pending	2	4%
No answer	2	4%
Total	45	100%

Question ‡10 Did you or your insurance company settle out of court?

Yes	16	36%
No	22	49%
Pending	5	11%
No answer	2	4%
Total	45	100%

Question ‡11 Are insurance companies and lawyers, in your opinion, too ready to settle suits out of court irrespective of the validity of the suit?

Yes	91	49%
No	32	17%
Undecided	63	34%
Total	186	100%

Question ‡12 Should a "formal effort" be made to jointly consider this problem with the Bar Association?

Yes	152	82%
No	13	7%
Undecided	21	11%
Total	186	100%

Question ‡13 Should plaintiffs pay court costs when their suit is denied?

Yes	165	88%
No	5	3%
Undecided	16	9%
Total	186	100%

Question ‡14 Have you had difficulty obtaining malpractice insurance or having your insurance cancelled after being involved in a suit?

Yes	3	2%
No	140	75%
No Ans.	43	23%
Total	186	100%

SUMMARY OF COMMENTS

PATIENT:

1. In loss of suit the patient plaintiff should pay court costs and lawyer fees and be made liable for a counter suit.
2. Counter suits in certain cases should be made against the plaintiff.

DOCTOR:

1. Take away practice privileges of the doctor-lawyer who practices both specialties.
2. Peer committees now being formed in the state association in the county societies can reduce the number of malpractice suits by reviewing each case and expressing an unbiased opinion as to the validity of the case.

INSURANCE:

1. The College should form its own insurance company for malpractice insurance.
2. Investigate the Los Angeles Liability Plan by Hartford Insurance Group of Connecticut which features (a) a retroactive sharing of profit (b) the society's medical review committee is allowed to examine all malpractice cases and advise the insurance company if the case has merit (c) the Hartford Company rating program will take into account investment income derived from premiums collected and set aside as reserves to pay anticipated claims. This will mean lower rates and other benefits for the members.
3. Establish a review committee to determine the merit of a suit. All suits of a nuisance value should be carried to court and not allow the insurance companies to settle out of court.
4. If insurance companies will not insure reasonably, we should have self insurance or no insurance and advise the public of our action.
5. Malpractice insurance should be discontinued for all doctors nationwide. This would decrease the number of malpractice suits, the size of the settlement and make doctors cautious.
6. If a reasonably priced policy could be issued contingent upon the physicians attending regional forums for instruction, you can bet the physicians would attend.

GOVERNMENT:

1. Federal legislation should be considered to cover the whole field of personal injury.
2. Legislation should be sought to limit compensation in malpractice cases for the particular disease or injury as an industrial accident.
3. The greatest single cause of the filing of malpractice actions on the part of attorneys is the contingency fee. In England and Canada contingency is prohibited by the public legal assistance policy of those countries. Why not establish a Legal Aid Government Agency in this country so that if a patient cannot pay for the attorney's fee on a private basis, legal advice to those people would be rendered through a

public legal assistance office. This would lessen our malpractice problem.

4. Legislation should be obtained to require plaintiffs to post bond to be lost if suit is denied.

LAWYER:

1. Make contingency fees illegal—should be on fee for service basis.
2. In malpractice suits the attorneys and plaintiffs name should be printed in the state journal so that doctors will know names of attorneys and patients who file law suits against doctors.
3. Work out an agreement between the Board of Censors of the State Medical Association and their counter parts of the Alabama Bar Association as to pretrial evaluation of malpractice cases. At least an effort should be made to consider this problem with the Bar Association.
4. All prospective malpractice litagation should be reviewed by a Joint Medico-Legal Panel to ascertain the validity of the intended action. Then if deemed legitimate refer to proper attorney for appropriate action of settlement.
5. Believe trial by judge is superior to trial by jury in malpractice cases due to types of people usually placed on a jury.

Encouraging Forecast On Air Pollution

The automobile industry is moving rapidly to lower the emission of hydrocarbons from its product.

General Motors is committed "to take the automobile out of the smog problem altogether." Hydrocarbon exhaust will be down 23 per cent in new cars this year in California and nationwide next year.

Schedules promulgated by HEW will drop the hydrocarbon emission from motor vehicles to 5 per cent by 1975.

Emission of carbon monoxide by next year's motors will be one third as much as from the uncontrolled. In regard to nitrogen oxides the Federal standards propose to drop this by 1975 to 15 per cent of present levels.

Antipollutant devices for 1971 cars will cost as little as $48. per vehicle.

While the automobile ranks first in tonnage of emitted pollutants there are significant dangers from sulphur oxides emitted by the burning of sulphur-containing fuel. An unusual weather pattern with persistent inversion poses a serious problem. New York City itself barely escaped another Donora in November, 1966.

Changes in the City code since that time have reduced the sulphur oxide to less than half and further tightening will reduce this in 1971 to 0.37 per cent. This restriction will have economic consequences in increased cost of fuel. Four stack control processes are now in commercial application.

It is estimated that the use of these devices on coal burning electric power plants will increase the cost of electricity 6 to 10 per cent—a reasonable price to pay for clean air.

Government and industry are now seriously involved in antipollution efforts—late, but not hopelessly so.

—*New York State Journal of Medicine*

Fathers and Sons in Medicine

A Proud Alabama Father And Three Fine Sons In Medicine

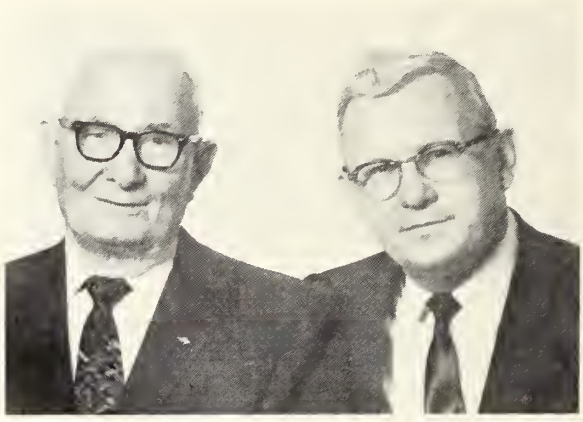
"My Three Sons," one of the happiest and most popular of the decent teevee shows, is also the unvoiced boast of a popular 82-year-old Birmingham doctor. All three sons have followed their father into medicine, two into his chosen specialty, obstetrics and gynecology.

Gilbert Franklin Douglas was born at Pushmataha, in Choctaw County, on Friday, Jan. 13, 1888, the son of Sarah Belinda (Grace) and George Washington Douglas. He was graduated from Meridian College, in Mississippi, before returning to the University of Alabama's School of Medicine, Mobile, for his M. D. degree.

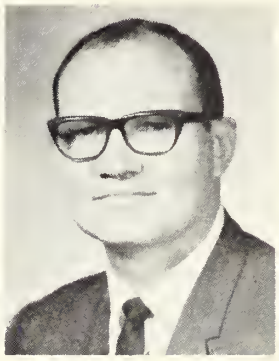
After receiving his license in 1910 he divided his early practice between Alabama and Mississippi, and was for five years assistant physician at the East Mississippi Insane Hospital, meantime pursuing postgraduate work at New York Polyclinic Medical School and Hospital, Harvard Graduate School of Medicine, New York Lying-In Hospital, and the University of Paris, in France. He was married June 26, 1912, to Mary Rachael Griffin, daughter of a Methodist minister, the Rev. and Mrs. Cornelius C. Griffin, of Chunky, Miss.

The Douglases lost the eldest of their three daughters, but the other two pursued their education in related sciences. Sarah Frances has two baccalaureate degrees from Birmingham-Southern, her Master's in biology and a degree in Medical Technology from the University of Alabama. She is now Technician for the Douglas Clinic, Birmingham.

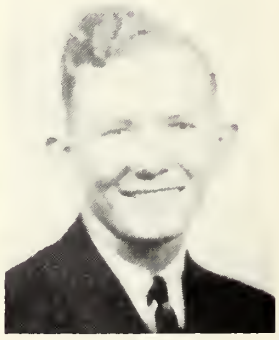
The other daughter, Lillian Miriam, has her B. S. from Birmingham-Southern, her Master's in Chemistry from Emory, and is today Mrs. Joseph W. Berg, Jr. Her husband is a Ph. D. who is presently Executive Secretary of the National Foundation of Science, Earth Division, residing in Washington, and lecturing at Cornell.



DRS. G. F. DOUGLAS, SR. & JR.



DR. WILLIAM



DR. GEORGE

Gilbert F. Douglas, Jr., was born May 7, 1916, the birthdate by the way, of the poet Robert Browning and of two great composers, Johannes Brahms and Peter Ilich Tchaikovsky. The junior Gilbert Douglas received his M. D. from Vanderbilt and trained at Hillman Hospital prior to service in the Navy in World War II. He returned to civilian life to marry a pianist, Sally

Phillips of Birmingham, a niece of "that bunch of Carmichael doctors." Dr. O. C. Carmichael, Sr., was Chancellor of Vanderbilt when Gilbert, Jr., received his M. D. degree in 1940. Completing his specialty training at Pratt Diagnostic Hospital, Boston, he returned to Birmingham to practice internal medicine.

Concerned with the collectivism in churches, schools and government, and interested in the future of their two sons and four daughters, Dr. and Mrs. Douglas, Jr., have devoted a great portion of their time in recent years to helping establish an independent church and school. Dr. Douglas is chairman of the school board of the twelve grades in Christian Heritage School. Though Gilbert III is through college and now in the Navy, their home (with three in college) is still "Grand Central Station" and the center of many activities involving church, school and music; also, various other study groups devoted to reestablishing America as a Christian Constitutional Republic.

The next Douglas son, George C., was born Nov. 29, 1922, following more closely in his father's footsteps. After earning his baccalaureate at Birmingham-Southern, he received his M. D. degree at the Medical College of Alabama, now in Birmingham, in the first class to have spent all four years at the expanded medical college (1949). He completed his residency in OB-GYN at the University Hospital in Birmingham and afterward spent two years in the Air Force in the States during the Korean War.

Dr. George Douglas married a Pennsylvania music teacher and returned to private practice in Birmingham. Six children were born to them by 1961, when he was recalled to military service during the Berlin crisis. Other professional opportunities lured him away from Birmingham and he is now in practice in Dilley, Texas.

Youngest of the three sons, William W. Douglas was born in Birmingham Feb. 19, 1928. He earned his BS degree from Birmingham-Southern, his Master's from the University of Alabama, Tuscaloosa, and his M. D. from the University of Alabama Medical School, Birmingham, going on to intern at Philadelphia General Hospital. Residencies in Pathology and Obstetrics and Gynecology took him to Birmingham, to Philadelphia, to New Orleans, and to Oklahoma City, before entering private practice in Birmingham.

But it could have been his father's earlier interest in Psychiatry that drew him away from the Magic City to further residencies in the VA Hospital of North Little Rock, to Chief, Day Treatment Center, to the post of Clinical Instructor at the University of Arkansas Medical Center, and presently to the position of Psychiatrist and Medical Director, South Arkansas Mental Health Center, El Dorado.

Dr. William W. Douglas also married a Pennsylvania girl, Elizabeth Ropyak, and they have two small sons. Though the family still calls him William, through his college and medical-school days in Birmingham he became Bill to everyone else, particularly in music circles, where his tenor voice was recognized as one of Birmingham's finest. He declines these kudos at present. His military service was spent as a flight surgeon. This led naturally to flying as a hobby, but today there is little time to indulge this special liking.

(Parenthetically, the April issue of The Journal of the Arkansas Medical Society welcomed Dr. William Douglas as "a new member of the Union County Medical Society," reviewed his medical history in four paragraphs, and concluded with the statement: "Dr. Douglas practices psychiatry with offices at 490 West Faulkner Street in El Dorado.")

But now to return to the first of these four physicians, whose biographical sketch was neglected to now. It was 1st Lt. Gilbert F. Douglas when he came out of Medical Officers Training Camp in 1917, and a year later it was Capt. Douglas. He was on active duty from July 25, 1917, to July 21, 1919,

with the 313th Infantry, 79th Division, first in this country and for more than a year in France.

He is on the staffs of South Highland Infirmary, of Birmingham Baptist Hospitals, University Hospital, Carraway Methodist, and East End Memorial, all of Birmingham, and has served as Chairman and Secretary of Gynecological Service of Hillman and Chairman of Obstetrical Service at Hillman, Birmingham. He is on the Board of Stewards of the First Methodist Church, Birmingham, and may count membership in and honors from some 38 medical organizations, not to mention 71 papers read by him and published under his signature.

Thus the family Douglas, proud of its heritage as Scotsmen, divides itself over three states, to establish, as the father of the three sons proudly puts it, "individual careers and personalities, dedicated to family life, teaching, God and country."

---

3 Generations Of Morgans Have Practiced In Alabama

The Welsh name of Morgan, which means "great, bright," has meant much to the history of Alabama, no better illustrated than in the fact that four of that name carried in Owen's *Dictionary of Alabama Biography* were veterans of the American Revolution.

John Tyler Morgan, the most prominent entry in Owen's book, was not an Alabama native. But John Hunt Morgan, the famed Confederate cavalry leader from Kentucky whose name is preserved in song as "Morgan, Morgan the raider, and Morgan's terrible men," was born in Huntsville.

It seems safe to guess that one or more of the foregoing are to be found in the family Bible of the trio of doctors who are subjects of this sketch. Which, is of no great importance here.

William Thomas Morgan, M. D., first of the three, is mentioned only in passing—a "horse-and-buggy doctor" in Piedmont, in Calhoun County. He was married to the former Fanny Harbin and their son, named James Orville, was born seven years before the turn of the century.

This son attended the public schools of Piedmont and went on to the Emory School of Medicine, from which he was graduated with his M. D. degree in 1916.

DR. & MRS. J. O. MORGAN, SR., & SON

It is significant that he went on to St. John Hospital in Pittsburgh for his internship in the year we went into World War I, for it was here that he met a pretty young nurse, Olive Kunkle, whom he married in 1918.

It was here too that young Dr. Morgan, now a war veteran, came to admire the nursing skill of the Sisters of Divine Providence. He persuaded a group of these Sisters to seek their Order's approval of a hospital, away down South in Gadsden, Alabama.

So it came about. Located on Chestnut Street, it was in operation to 1930, when its name and location were changed. The Noojin Building now occupies the hospital's

(Continued on Page 57)

The girth control pill

Tepanil® Ten-tab

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

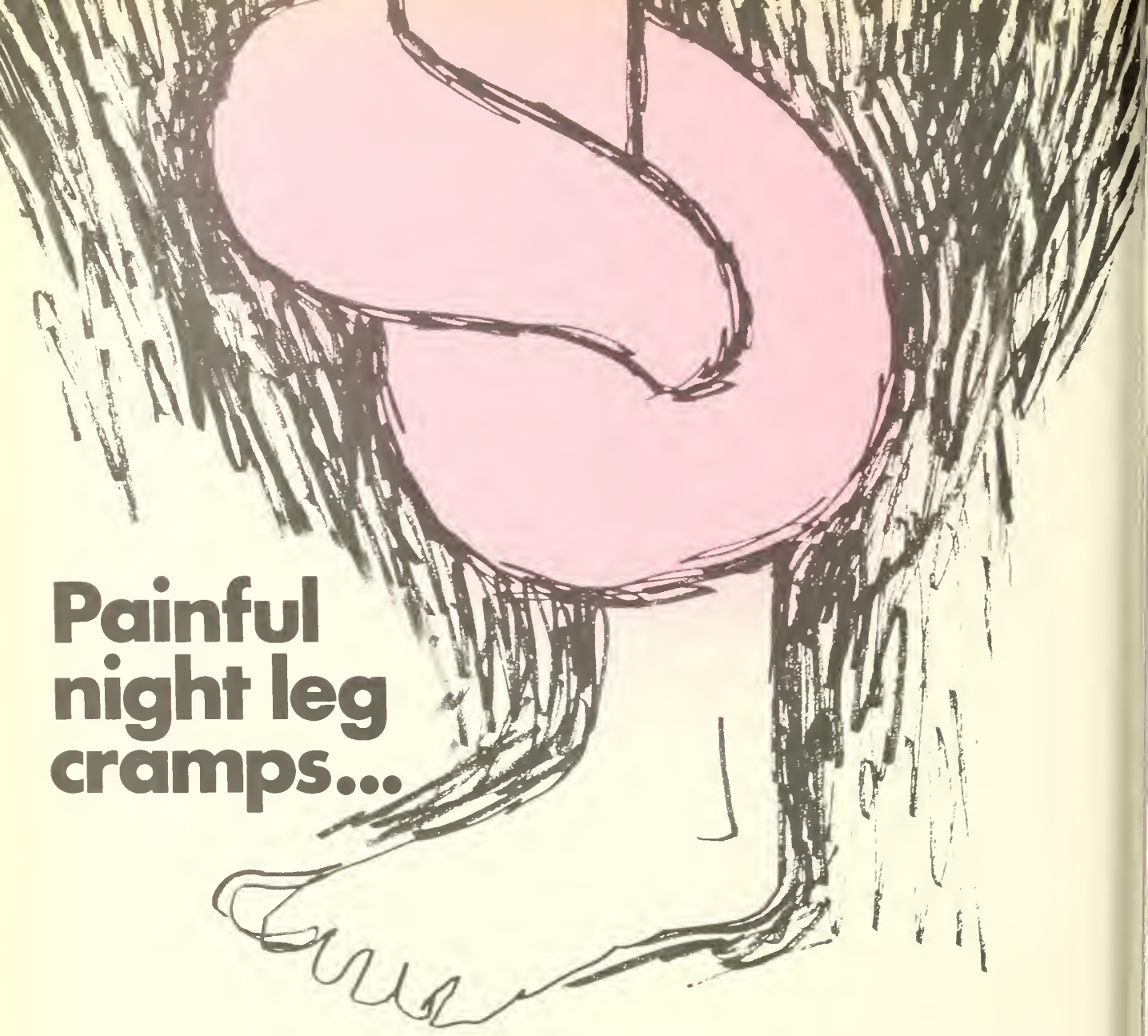
Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Controindicotions:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precoutions/Adverse Reoctions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosoge:** One tablet upan retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

0915A 1/70

(Continued from Page 54)

original site, and the institution itself is known to Alabama as the Holy Name of Jesus Hospital.

Gadsden has been the home of the Morgans ever since, and two children were born to them: the late Frances Morgan Bellenger and the third subject of this sketch, James Orville Morgan, Jr., M. D., who not only followed his father into medicine but into his specialty, surgery.

Both are Fellows of the American College of Surgeons, both of the Southeastern Surgical Congress, and both have gone through the roll call of offices in the Etowah County Medical Society.

Dr. J. O. Morgan, Sr., was 1954 President of the Medical Association of the State of Alabama, and in addition to many other honors that have come to him in his profession, he is a steward of Gadsden's First Methodist Church.

The third in the line of Morgan doctors was born in Gadsden in 1926, was graduated from Baylor School 18 years later, and went on to Vanderbilt where he earned his M. D. degree in 1952, going to Johns Hopkins for his internship. In 1953 he returned to Alabama to serve his surgical residency under the late Dr. Champ Lyons, and three years later entered surgical preceptorship and practice with his father in Gadsden.

In 1950, Miss Elizabeth Edmunds of Petersburg, Virginia, became Mrs. J. O. Morgan, Jr., and they have three sons—Meade, J. Orville III, and Feild—any one of whom may well become the fourth generation of the Morgan family choosing medicine for a profession.

The senior Morgans have two other grandchildren, Don Bellenger and Cherie Bellenger Stewart.

Not For Dogs!

Another chemist with whom Bernard collaborated during the early years of his career was Charles Barreswill . . . . Barreswill was in the habit of drinking cognac brandy after every meal. It was an aid to digestion, he said. Although Bernard came from one of the great wine regions of France, was descended from a long line of winegrowers, and was a total abstainer himself, Barreswill's drinking upset him.

As for the idea that cognac was an aid to digestion, Barreswill had come to the wrong man with that particular excuse. Bernard was eventually to devote a substantial part of his lifework to determining what happened to various substances taken in as food.

Bernard decided to perform an experiment to test Barreswill's contention that cognac promoted digestion. He would feed a dog and then give it a substantial amount of cognac. Then he would open the dog's stomach to see how well the food was being digested.

"I wish you would just give *me* the drink," Barreswill protested.

Bernard went ahead with the experiment. He found that cognac did not improve the dog's digestion, but actually impaired it; some of the food in the dog's stomach had not been digested at all.

"What do you think of that?" Bernard asked his friend triumphantly.

Barreswill thought for a moment. "What your experiment proves," he said, "is that cognac was not meant for dogs."

*Jerome Tarshis: *Claude Bernard, Father of Experimental Medicine,* 1968.

Direct Patient Billing Aimed At Medicine's Middle Man

The "middle man" standing between the doctor and his patient would be eliminated under an "Individual Responsibility Program" (IRP) just instituted by the Medical Society of Mobile County.

Simply, the physician provides a medical service for the patient, and the patient is directly responsible to the physician for payment of his fees. Forms are provided to guide the patient's application for reimbursement, whether to a private insurance carrier or a governmental agency, but there will be no intermediary between doctor and patient.

A detailed explanation of direct patient billing, issued by the Mobile Society, follows:

"The purpose of this letter is to explain to you the principle and procedure of patient billing under the direct payment for service system. This program, known locally as IRP (Individual Responsibility Program), has the full approval and sanction of the Medical Society of Mobile County. Whether he operates on the IRP system or accepts assignments from third party insurers or governmental agencies is a matter of personal choice of each member of the Society.

"Basically, IRP fosters the personal relationship between the physician and patient, removing from that relationship the interposition of any third party (private insurance carrier or governmental agency). The physician provides a medical service to the patient, who, in turn, is directly responsible to the physician for payment of his fees. In addition, the physician helps the patient collect from any third party any money due the patient, by furnishing to him a standard form containing all the information needed for the patient to establish his claim. Thus the lines of individual responsibility are clearly defined—physician to patient, patient to physician, and insurance company or federal agency to the insured.

"By not accepting Medicare assignments the physician protects himself against accepting as full payment for services rendered whatever amount the fiscal intermediary decides his services are worth. He retains the right to set his own reasonable fees. If he elects to accept Medicare assignments, the physician agrees to accept as full payment for service rendered whatever the fiscal intermediary determines the fee schedule should be, with no published fee schedule or advance information as to what will be allowed (the physician buys a pig in a poke).

"Medicare (Health Care for the Aged) now pays the patient on the basis of an itemized bill but Military Dependents Health Care (CHAMPUS) requires the patient to pay his bill to the physician and in turn be reimbursed by the fiscal intermediary (in Alabama Mutual of Omaha is the fiscal administrator). If the patient is unable to pay his bill in one lump sum, he may pay in whatever increments the patient and physician agree upon, then presenting a receipt for the paid amount for reimbursement. Or should the physician and patient desire to do so, a promissory note may be taken by the physician in payment. This constitutes satisfactory evidence that the bill has been paid by the patient and Mutual of Omaha will then pay the patient directly. The patient, in turn, endorses the check to the physician, who then cancels the promissory note.

"Insurance carriers other than Medicare normally pay their obligations to the patient upon incurrence of debt by the patient for services rendered. Therefore, the bill does not have to be paid first by the patient in order for him to collect from his insurance company. Simple completion of the IRP form will permit the patient to be paid any amount due him from the insurance company.

"Further information and the IRP forms themselves are available at the Medical Society office."

HELP! IN SWIMMER'S EAR,

help comes fast with Furacin Otic. Diperodon hydrochloride provides rapid relief of pain and pruritus . . . antibacterial Furacin (nitrofurazone) and antimycotic Micofur (nifuroxime) combat the susceptible pathogens. The nonmacerating, hygroscopic vehicle softens cerumen . . . penetrates to the infection . . . permits free drainage.

FURACIN® OTIC

(nitrofurazone)

antibacterial/anesthetic/antifungal

Formula: Contains (w/w) 0.2% Furacin, brand of nitrofurazone, 0.375% Micofur™, brand of nifuroxime, and 2% diperodon hydrochloride dissolved in water-soluble, nondrying, hygroscopic polyethylene glycol.

Indications: For treatment of bacterial otitis externa, bacterial otitis media and otomycosis. In otitis media, this preparation is not effective if the tympanic membrane is intact.

Furacin (nitrofurazone) and Micofur (nifuroxime) are active against a variety of gram-positive and gram-negative organisms. Activity versus Pseudomonas sp. is limited to certain strains. Micofur (nifuroxime) is active against Candida (Monilia) albicans.

Precautions: Sensitization may occur with prolonged use and is more likely to develop in eczematous otitis externa. To minimize such reactions (a) limit application to a week or less, and (b) avoid use of excessive amounts which may run down the face.

This preparation is not indicated for use in treatment of cholesteatoma, where surgical intervention is necessary.

Supplied: Bottle of 15 cc. with dropper.

™ Originators and Developers of The Nitrofurans

EATON LABORATORIES

Division of The Norwich Pharmacal Company

NORWICH, NEW YORK 13815

Changing Trends In Malpractice Litigation

Walter P. Gewin, Tuscaloosa, Alabama

As one member of a rather large family which has produced far more physicians than lawyers, perhaps I may be deemed qualified to speak to you very frankly. As to the subject assigned to me, "Changing Trends in Malpractice Litigation," I should not hope to "tell it all"; but as to what I do say, my purpose will be "to tell it like it is." You would not approve anything less.

Without the slightest or even the remotest intention of flattery, I can truthfully say that yours is probably the greatest profession known to our civilization. Robert Louis Stevenson's statement about physicians in the poem *Dedication* in his collection entitled *Underwoods* aptly describes your role in the everyday affairs of people:

> There are men and classes of men that stand above the common herd: the soldier, the sailor, and the shepherd not infrequently; the artist rarely; . . . the physician almost as a rule. He is the flower . . . of our civilization.
>
> . . .
>
> Generosity he has, such as is possible to those who practise an art, never to those who drive a trade; discretion tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage.

The subject of medical malpractice is one of the most controversial and critical interprofessional problems of the modern day. It is your professional duty to make every reasonable effort possible to achieve solid and substantial progress toward a greater understanding and possible solution of the problem. Malpractice litigation is known for its bitterness, its personal feelings of animosity, and the natural emotional reactions which arise from an attack on one's practice of a profession for which he has trained a substantial part of his life.

Those who have paid attention to the subject admit that the present malpractice situation has developed into a national crisis within the past few years. Not only is this crisis recognized by students in the medical field, it is considered a serious problem by the Senate Subcommittee on Executive Reorganization of which Senator Abraham Ribicoff of Connecticut is chairman.[1]

As clearly stated by Charles Kramer an authority in the field of medical malpractice,[2] the subject is not a new one. Under the ancient Code of Hammurabi a physician was an insurer and he practiced his profession at his own peril. This Code, approximately 4,000 years old, contains the following provision:

> If the surgeon has made a deep incision in the body of a freeman and has caused the man's death, or has opened the caruncle in the eye and so destroys the man's eye they shall cut off his forehand.

There was a malpractice case in England as early as the year 1374 and the first reported case in the United States occurred in 1794. Current leaders of the medical profession are keenly aware of malpractice problems according to Kramer. He points out that in the New York Times of May 28, 1959, Dr. Paul R. Hawley, the Director of the American College of Surgeons is reported to have said:

> It is reliably estimated that one-half of the surgical operations in the United States are performed by doctors who are untrained or inadequately trained to undertake surgery.

(Continued on Page 63)

Mr. Gewin is a United States Circuit Judge in the Fifth Judicial Circuit, Tuscaloosa, Alabama. This paper was delivered to the Orientation Program at the 109th Annual Session of the Medical Association of the State of Alabama in Mobile.

I love my family.
I adore this house.
My in-laws are great.
The neighbors are wonderful.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient, if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated). Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack]. Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

The young homemaker: her underlying anxiety and tension can surface and intensify under the continuous stress of rearing a growing family. Especially when she's confined to the home and its environs so much.

You can help her over the rough spots with reassurance and counsel. Equanil can help relieve tension, ease anxiety—with little risk of serious side effects. Time and experience will probably do the rest.

Equanil®
(meprobamate)

Wyeth Laboratories
Philadelphia, Pa.

Photo professionally posed

(Continued from Page 60)

To the same effect is the statement of Dr. Arthur James Mannix, Jr. of the Department of Surgery of New Rochelle Hospital.[3] In the year 1960 he stated:

> Errors in judgment or technique concerning either the anesthesia or the surgery, or a combination of the two, contribute close to fifty per cent of the mortality in the operating room. It is here that death occurs, not only because of the gravity of the disease or the magnitude of the procedure, but also because someone in a responsible position ignored some fundamental principle of good therapy.

In the year 1963 a third physician stated:

> If patients brought malpractice suits against all guilty doctors—and against guilty doctors only—the courts would probably be flooded with three times the number of such suits now in litigation. . . . Though we all know about such abuses, too often we doctors keep our mouths shut.[4]

While it may be true that lawsuits are a symptom of something wrong in the medical profession rather than a cause; it is likewise true that the legal profession has a definite responsibility which it should not shun in the solution of the problem. It is the duty of every ethical attorney carefully to investigate cases brought to him before filing suit. There is no place for the nuisance value lawsuit in medical malpractice. Insofar as it is humanly possible to make an advance determination, only those malpractice cases which have merit should be accepted and prosecuted by the legal profession.

In the past few years a flood of criticism, aimed at the medical profession, has appeared under the intriguing subject heading "The Conspiracy of Silence."[5] The conspiracy of silence relates to the stubborn reluctance of physicians to give testimony on behalf of claimants in medical malpractice cases. The practice is widespread, and the critics assert that the merits of the case have no bearing on the application of the rule. The Minnesota Law Review (cited in the footnote) makes the following comment:

> [The] reluctance to testify on the part of the members of the medical profession has been called the "conspiracy of silence" and has been explained in the following ways: (1) Doctors believe that defendants in malpractice cases are found negligent when in fact no negligence has occurred; (2) they believe that jurors are ill-equipped to cope with the technicalities of medicine; (3) they fear that lawyers, in cross examination, may make doctors appear ridiculous on the witness stand; (4) they sympathize with the defendant because they believe that any doctor, regardless of his medical competence, could be sued for malpractice; (5) doctors are discouraged from testifying by the medical profession; and (6) they are also discouraged from testifying by malpractice insurance companies.

It is the rule in practically every state that before a doctor may be held liable for breach of his professional duty in a malpractice case, the claimant must establish by the testimony of another physician such default on the part of the defending doctor. Here the curtain of silence falls. Almost without exception, doctors are unwilling to testify against a member of the profession, even though he is known to be negligent. In some cases to do so may be to invite social and professional ostracism.

This widely prevailing reluctance of medical men to testify against their brothers or colleagues and the pressure of hardship incident to such a situation, have resulted in the development of certain techniques by counsel, courts, and some legislative bodies to alleviate the problem. This present trend has resulted in at least the following three well-known rules or techniques:

1. The abolition of the "locality" rule.
2. Permitting the plaintiff or claimant

to compel the defendant doctor to give expert testimony as to the community standard of conduct and possibly evidence which may show his departure from the standard.

3. A more liberal use of the doctrine of res ipsa loquitur.

In my opinion these rules constitute important trends in malpractice litigation; and they should be examined. Because of time limitations our discussion must be brief.

The Locality Rule

The leading case dealing with the locality rule, and repudiating it, is *Brune v. Belinkoff*, a case which arose in New Bedford, Massachusetts in 1968.[6] An excellent commentary and analysis of this case and the rule itself may be found in 21 Alabama L. Rev. p. 134, Fall 1968.

In *Brune* an anesthesiologist administered a spinal anesthetic containing eight milligrams of pontocaine to the plaintiff. She was in labor at the time. Approximately 11 hours afterward the plaintiff slipped and fell when she attempted to get out of bed. At that time and thereafter she experienced numbness and weakness in her left leg. In the malpractice case which followed there was testimony to the effect that the eight milligram dosage was proper. There was also testimony that it was excessive in the circumstances and that only five milligrams in one cubic centimeter of ten per cent dextrose should have been given.

The jury decided the case in favor of the physician, but the judgment was reversed on appeal. The claimant requested the court to instruct the jury to the effect that "the defendant owed the plaintiff the duty to have and use the care and skill commonly possessed and used by similar specialist[s] in like circumstances." Instead the court instructed the jury that the defendant had only to exercise the care and skill of the *average* practitioner *in New Bedford*. This latter instruction was considered defective by the appellate court because it limited the physician's responsibility to the locality in which he practiced.

The court set forth the plaintiff's contentions and explained the locality rule as follows:

> The rationale of the ["locality"] rule . . . is that a physician in a small or rural community will lack opportunities to keep abreast with the advances in the profession and that he will not have the most modern facilities for treating his patients. Thus, it is unfair to hold the country doctor to the standard of doctors practicing in large cities. The plaintiffs [on the other hand] earnestly contend that distinctions based on geography are no longer valid in view of modern developments in transportation, communication and medical education, all of which tend to promote a certain degree of standardization within the profession.

The Justices of the Massachusetts Court agreed with the plaintiff and stated their conclusion as follows:

> We are of opinion that the "locality" rule . . . which measures a physician's conduct by the standards of other doctors in similar communities is unsuited to present day conditions. The time has come when the medical profession should no longer be Balkanized by the application of varying geographic standards in malpractice cases.

The court continued its reasoning and concluded that the locality rule was absurd in contemporary society. We quote from the opinion:

> The present case affords a good illustration of the inappropriateness of the "locality" rule to existing conditions. The defendant was a specialist practising in New Bedford, a city of 100,000, which is slightly more than fifty miles from Boston, one of the medical centers of the nation, if not the world. This is a

(Continued on Page 70)

you can hang on for a few more minutes, Doctor, n sure I'll sneeze again."

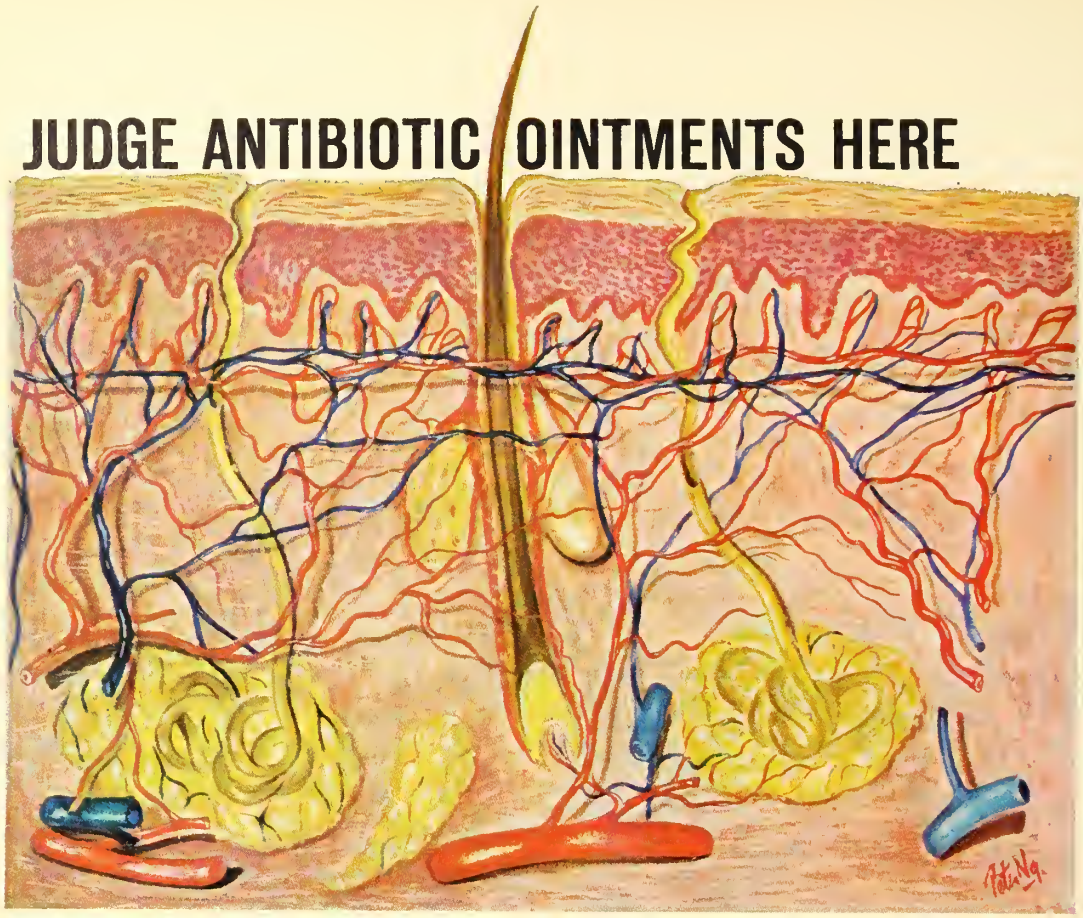
neeze. And sneeze some more. But with Novahis- LP, most patients get prompt and long-lasting from the symptoms of allergies and colds. These nuous-release tablets have a vasoconstrictor-anti- nine formulation that begins working in minutes, continues to provide relief for hours. Even when congestion is due to repeated allergic episodes, Novahistine LP tablets, morning and evening, let most patients breathe freely all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine® LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW **THE DOW CHEMICAL COMPANY** Rx Pharmaceuticals Indianapolis

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

CAUTION:
OVEREATING
MAY BE HAZARDOUS
TO YOUR HEALTH.
According to the Framingham Heart Study,
the obese face:
86% greater risk of angina pectoris,
82% greater risk of diabetes,
71% greater risk of coronary heart disease.*
Obesity may also aggravate osteoarthritis,
flat feet, intertriginous dermatitis, varicose
veins, and ventral or diaphragmatic hernias.[1-3]

you are considering weight reduction, consider

Preludin®

phenmetrazine hydrochloride

Endurets®

prolonged-action tablets

Often effective

Controlled studies in a general patient population have shown that when Preludin is used with diet, the rate of weight loss exceeds that obtained by placebo and diet.

Long acting

Slow, even release of the active principle usually suppresses appetite continuously for about 12 hours.

Once-a-day dosage

One Endurets tablet after breakfast. It helps reduce weight and costs, conveniently.

For contraindications, warning, precautions, and adverse reactions, please see the full prescribing information.
It is summarized on this page.

Where there's no will there's a therapeutic way.

*Among persons 20% or more overweight as compared with median weight for persons of like height and sex.

1. Kannel, W.B., *et al.*: *Circulation* 35:734, 1967.
2. Thomas, H.E., Jr., *et al.*: *Med. Times* 95:1099, 1967.
3. Albrink, M.J., in: Beeson, P.B. & McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Phila.: W.B. Saunders Co., 1967.

Preludin®
phenmetrazine hydrochloride

Preludin is indicated only as an anorexigenic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension (see Precautions), or pregnancy (see Warning).

Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.

Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.

Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.

Adverse Reactions: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache.

Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets tablet a day, taken by midmorning.

Availability: Pink, square, scored tablets of 25 mg. for b.i.d. or t.i.d. administration, in bottles of 100 and 1000.

Pink, round Endurets® prolonged-action tablets of 75 mg. for once-a-day administration, in bottles of 100 and 1000.

(B)R3-46-560-B

For complete details, please see full prescribing information.

Under license from
Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

PR-7169

(Continued from Page 64)

> far cry from the country doctor . . . who ninety years ago was called upon to perform difficult surgery. Yet the trial judge told the jury that if the skill and ability of New Bedford physicians were "fifty per cent inferior" to those obtaining in Boston the defendant should be judged by New Bedford standards. . . . This may well be carrying the ["locality"] rule . . . to its logical conclusion, but it is, we submit, a reductio ad absurdum of the rule.

As indicated earlier, some commentators have concluded that the "locality rule" has been abolished in some areas because of the difficulty in obtaining physicians, strictly on the local level, who are familiar with and will testify as to the standards of physicians in the local medical establishment.

It should be pointed out that the Massachusetts court did not define the term "*average physician*" whose skill and care are now the standard in Massachusetts. It should be pointed out, however, that both the law and medical science have been forced to deal in ambiguous terms throughout the years. It is difficult to define the word "normal," or to give an intelligent definition of the "reasonable man." Moreover, the Massachusetts court has softened its departure from the so-called locality rule by holding that "It is permissible to consider the medical resources available to the physician as one circumstance in determining the skill and care required." Accordingly, to the extent that some medical resources are *not* available to the physician in a particular community the so-called "locality" factor remains to reduce his liability.

The law review analysis to which I referred earlier seems to reach an equitable conclusion, expressed as follows:

> In sum, the *Brune* test appears to strike a more equitable balance between the competing interests of the injured patient and the physician than did the "locality" rule. Persons injured by doctors' incompetence should not be denied recovery simply because most physicians in the defendant's community are equally lacking. Nor should plaintiffs face undue hurdles in securing expert medical witnesses. On the other hand, the courts should be slow to hold liable physicians whose geographical location denies them necessary medical resources.

Those of you who practice in Alabama are naturally interested in the rule applied by Alabama's courts. Footnote 26 of the cited Alabama Law Review article sets out the Alabama rule in a very precise manner:

> In 1901 the Alabama justices took their law from an encyclopedia, which stated that "'[t]he reasonable and ordinary care, skill and diligence which the law requires of physicians and surgeons is such as physicians and surgeons in the same general neighborhood, in the same general line of practice, ordinarily have and exercise in like cases.'" McDonald v. Harris, 131 Ala. 359, 368, 31 So. 548, 550 (1901). A search of subsequent malpractice cases reveals that the court has mechanically adhered to this strict standard to the present time.

Examination Before Trial

The landmark case in this area comes to us from New York in the case of *McDermott v. Manhattan Eye, Ear & Throat Hospital,* decided in 1964.[7] This case involved several eye physicians and the hospital. The surgical procedure was a corneal transplant and incidental procedures, performed by several outstanding ophthalmologists. The evidence showed that the patient was assured that the surgical procedures involved would not diminish her vision in any event, and that it was highly likely that substantial improvement would result. However, the operation was unsuccessful and as a result the plaintiff sustained a substantial loss of vision.

The plaintiff undertook to call the operating physicians to the witness stand in

order to prove her case by direct questions propounded to them. The trial court refused to compel the physicians to answer. The issue to be decided on appeal was whether she should have been permitted to examine her doctors for the purpose of establishing a standard of care by expert testimony. The appellate court decided as follows:

> In short, then, a plaintiff in a malpractice action is entitled to call the defendant doctor to the stand and question him both as to his factual knowledge of the case (that is, as to his examination, diagnosis, treatment and the like), and, if he be so qualified, as an expert for the purpose of establishing the general accepted medical practice in the community.
>
> . . .
>
> It is therefore, not inconsistent to permit the plaintiff to question the defendant as an expert even though we would not accord him the same right with respect to an unwilling witness who is in no way connected with the action. The very inability of a plaintiff in a malpractice action to *compel* the attendance and testimony of a "disinterested" medical witness underscores the need and importance of allowing such a plaintiff the opportunity of questioning his adversary as an expert.

Res Ipsa Loquitur

Res ipsa loquitur is a latin phrase, often used in the law, which literally means, "The thing speaks for itself." An excellent article dealing with this legal principle in its application to medical malpractice cases appears in 60 Northwestern University L. Rev. at page 853. The following quotation from the cited article explains its meaning:

> The doctrine applies to cases where the simple fact that someone was injured gives rise to an inference that another person, the defendant, was negligent. In negligence cases the plaintiff ordinarily proves specific acts of negligence to support his claim, but a verdict for the plaintiff is supported in *res ipsa loquitur* cases by proof only of the fact of injury and a few pertinent surrounding circumstances. Hence, the doctrine is actually only a method of proof—it is a special kind of circumstantial evidence.
>
> The application of the doctrine is limited by certain well settled principles. First, the circumstances must indicate that the injury would not have occurred unless someone was negligent. Second, the circumstances must also indicate that the negligent person was the defendant. Third, the injury must not have resulted from an assumption of risk or contributory negligence. A fourth condition sometimes required is that the evidence explaining the injury should be more accessible to the defendant than the plaintiff.

There are two other principles of law which have formed a part of recent trends in medical malpractice litigation. These are the so-called "Captain-of-the-ship" doctrine and the doctrine of "Informed Consent." The State of Pennsylvania has led in the development of the captain-of-the-ship doctrine. Their outstanding expression is set forth in the case of *Mazer v. Lipschutz* decided in 1964.[8]

At the trial level the court held that a surgeon was not responsible for any negligence on the part of hospital employees. The appellate court remanded the case for a new trial on the issue of the surgeon's *vicarious* liability. Essentially the court held that the surgeon was in charge of the entire surgical procedure, and that he was responsible for everything that was done during the process in accordance with the doctrine of *respondeat superior.*

The facts may be stated very briefly. Professor Israel Abrams entered Albert Einstein Medical Center voluntarily for the removal of his gall bladder and cystic duct. He was placed in room 807. The physician who was to administer the anesthetic for the

surgical procedure ordered two pints of blood. The technician in charge of the blood bank checked the hospital census and saw an Israel Abrams registered in room 342. He ordered a blood sample drawn. The blood sample of Israel Abrams in room 342 was group *A* Rh positive. Later a blood specimen was taken of Israel Abrams in room 807 and was typed as group *O* Rh positive. The anesthesiologist ordered one pint of blood placed in the operating room prior to surgery. The bottle was marked "Israel Abrams, Room 342 A positive." During the course of the operation the patient went into shock and the doctor prepared to give the blood. The discrepancy was noticed and the technician was called. The technician assured the anesthesiologist that the number was a clerical error and that the blood type was correct. It was then administered to Professor Abrams. As the result of an incompatible blood transfusion there was a severe reduction of kidney function and Professor Abrams died.

In deciding the case the appellate court analogized the surgeon to the master of a ship and attributed to the surgeon the same supreme control over any person who brings himself within the confines of the operating room. The doctrine received its name from the majority opinion in *McConnell v. Williams*[9] wherein the court stated:

> And indeed it can readily be understood that in the course of an operation in the operating room of a hospital, and until the surgeon leaves that room at the conclusion of the operation. . . he is in the same complete charge of those who are present and assisting him as is the captain of a ship over all on board, and that such supreme control is indeed essential in view of the high degree of protection to which an anesthetized, unconscious patient is entitled.

A very careful analysis of this doctrine is given in an article by Dr. Dennis M. Mahoney appearing in the Dickinson L. Rev., Spring 1967, Vol. 71, page 432.

The doctrine of "Informed Consent" is wide-spread in its application. This doctrine is rather old but renewed interest developed after decisions in two leading cases in the year 1960, *Natanson v. Klein,* [10] and *Mitchell v. Robinson.*[11] The rule is defined briefly in an article entitled "Informed Consent in Medical Malpractice" appearing in 55 Calif. L. Rev. 1396 written by Michael Justin Meyers. I quote from that article:

> In the absence of special circumstances, a physician may not treat a patient without first obtaining his consent. Courts in many jurisdictions, however, have questioned whether consent should be binding where the patient does not, at least in some measure, consciously weigh the risks of undergoing treatment against the risks of foregoing treatment. A decision to undergo treatment despite such risks is the product of "informed consent." But the average patient's ignorance of medical science very likely makes him unaware of particular risks inherent in a proposed treatment, and hence prevents him from giving the informed consent which the law requires. Informed consent, therefore, concerns the extent to which a doctor must disclose risks inherent in a contemplated method of treatment.

In two cases which I have been required to write recently some of the principles I have mentioned were involved. One case, *Haywood v. Echols,*[12] arose in New Orleans and was decided in 1966. That case involved the severance of the ninth cranial nerve when the patient claimed that it was obvious that the fifth cranial nerve should have been severed. The physician was completely exonerated.

The second case, *Fleming v. Michigan Mutual Liability,*[13] decided in 1966 also came from Louisiana. It involved a skin graft. The ruling in that case was also favorable to the physician. That case dealt specifically with informed consent.

(Continued on Page 74)

Doctor, after all we've been through together...

abscess
acne
amebiasis
anthrax
bacillary dysentery
bartonellosis
bronchitis
bronchopulmonary infection
brucellosis
chancroid
diphtheria
endocarditis
genitourinary infections
gonorrhea
granuloma inguinale
listeriosis
lymphogranuloma
mixed bacterial infection
osteomyelitis
otitis
pertussis
pharyngitis
pneumonia
psittacosis
pyelonephritis
Rocky Mountain spotted fever
scarlet fever
septicemias
sinusitis
soft tissue infection
tonsillitis
tularemia
typhus fever
urethritis

...don't you think it's time we were on a first-name basis?

call me "Achro® V"

Every pharmacist knows ACHRO® V stands for ACHROMYCIN® V

Contraindications: Hypersensitivity to tetracycline.
Warning: In renal impairment, since liver toxicity is possible, lower doses as indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.
Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage. Upon adverse reaction, stop medication and treat appropriately.

Achromycin® V
Tetracycline

Lederle LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York 10965

484-9

(Continued from Page 72)

In conclusory terms it is difficult to list all of the causes which have contributed to the great increase in malpractice cases. It is likely that physicians are in a better position to answer that question than are lawyers or judges. One factor may be a shortage of doctors. In America there are less than three hundred thousand active doctors who must care for over two hundred million people. Senator Ribicoff's subcommittee points to a number of factors: (a) deterioration of the physician-patient relationship; (b) publicity given to higher malpractice judgments and settlements; (c) knowledge on the part of many patients that the physician is insured. The solution here requires the same elements as solutions of other problems—a better appreciation and understanding of the problem. There should be a closer relationship between the medical and legal professions. Permit me to recommend that you read an article which has just appeared in the April (1970) issue of INSURANCE COUNSEL JOURNAL Page 206. It is written by Crawford Morris, an outstanding trial lawyer of Cleveland, Ohio. He has spent much of his time defending physicians in malpractice cases. It is entitled: "RESPONSE TO RIBICOFF: MALPRACTICE SUITS vs. PATIENT CARE." Before you read it brace yourself for the facts as they appear. It was written at the request of Senator Ribicoff.

I close on the same note upon which I opened. Your profession possesses a vast reservoir of good will. This fact is particularly true in the South. Whether you keep or lose the reservoir will doubtless depend on you. I think my own physician is in the audience; but whether he is or not I can surely agree with Stevenson to the extent of saying that the typical modern physician is one of the most important flowers of our civilization—possessed of devotion to duty, discretion, cheerfulness and courage.

References

1. Trial (National Legal News Magazine) Feb-Mar 1970. Medical Malpractice: The Patient versus the Physician, Senator Abraham Ribicoff, p. 10; Lawsuits: A Symptom not a Cause, Eli P. Bernzweig, Assistant for Malpractice Research and Prevention of the Department of Health, Education and Welfare, p. 14; Money Well Spent, William P. Sanders, p. 16; The Price of Incompetency, David M. Harney, p. 17; The Conspiracy of Silence, Joseph Kelner, p. 18; A Constructive Answer, Stanley G. Feldman, p. 23; Not a Medical Problem, Richard P. Bergen, Director Legal Research Department AMA, p. 24; A Four-Step Program, Thomas S. Durant, Assistant Director Massachusetts General Hospital, Boston, p. 26.

2. C. Kramer, Medical Malpractice (Rev. ed. 1965).

3. 60 N. Y. J. of Medicine, 686 (1960).

4. Corio, We Need More Malpractice Suits, Medical Economics, vol. 40, October 21, 1963, pp. 203, 206. Last 3 quotations come from Kramer, supra n. 2.

5. See 45 Minn. L. Rev. 1019; Kelner n. 1; Kramer, supra, n. 2.

6. 235 N. E. 2d 793.

7. 203 N. E. 2d 469.

8. 327 F. 2d 42.

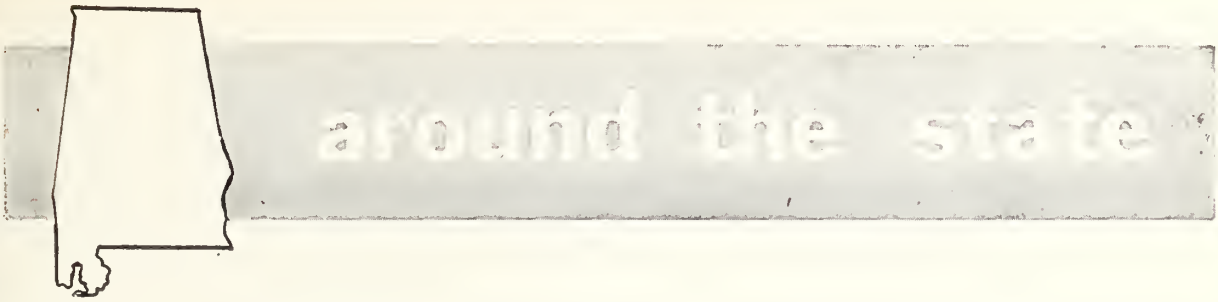
9. 361 Pa. 355

10. 186 Kan. 393, mod. 187 Kan. 186.

11. 334 S. W. 2d 11.

12. 362 F. 2d 791.

13. 363 F. 2d 186.



Vital Statistics

CHANGES OF ADDRESS

Calhoun County

Gray, Hugh E., present Anniston to 21 Sunset Dr., Anniston, Alabama 36201

Kwong, Lun H., present Anniston, to 115 E. Francis Ave., Jacksonville, Alabama 36265

Dallas County

Cox, Clyde B., present Selma to Doctors Park, West Dallas Ave., Selma, Alabama 36701

Ehlert, William E., present Selma to P. O. Box 1345, Selma, Alabama 36701

Houston County

Hilbert, John F., present Dothan to P. O. Box 1846, Dothan, Alabama 36301

Johnson, George E., present Dothan to P. O. Box 2087, Dothan, Alabama 36301

Jefferson County

Abernathy, Frank, present Birmingham to 1309 Parliament Lane, Birmingham, Alabama 35216

Carmichael, R. Glenn, present Birmingham to Professional Office Bldg., 800 Montclair Road, Birmingham, Alabama 35213

Ford, Robert G., present Birmingham to Professional Office Bldg., 800 Montclair Road, Birmingham, Alabama 35213

Henry, N. Winston, present Birmingham to 901 15th Street, South, Birmingham, Alabama 35205

Johnson, Bruce K., present Birmingham to 2930 12th Ave., North, Birmingham, Alabama 35234

Kessler, Charles R., present Birmingham, to Suite 327, 801 Princeton Avenue, S. W. Birmingham, Alabama 35211

Levy, David, present Adamsville to 3376 Overtown Road, Birmingham, Alabama 35223

Morton, Benjamin F., present Birmingham to Professional Bldg., 801 Princeton Avenue, Suite 601, Birmingham, Alabama 35211

Peacock, Thomas H., present Alexandria, La. to 3607 Royce Street, Alexandria, Louisiana 71301

Pearson, Robert S., present Birmingham to 801 Princeton Avenue, Birmingham, Alabama 35211

Ray, Emmette C., present Tavares, Florida to Rt. 2, Box 133, Tavares, Florida 32778

Russakoff, Abraham H., present Birmingham to Professional Bldg., Suite 517, 800 Montclair Road, Birmingham, Alabama 35213

Russell, Robert T., present Birmingham to Suite 523, Professional Bldg., 800 Montclair Road, Birmingham, Alabama 35213

Sherrod, Henry L., Jr., present Birmingham to Suite 103, Professional Bldg., 800 Montclair Road, Birmingham, Alabama 35213

Upchurch, James C., present Birmingham to 801 Princeton Avenue, Birmingham, Alabama 35211

Warrick, William D., present Birmingham to Suite 524 Professional Bldg., Birmingham, Alabama 35213

Brown, Andrew M., present Birmingham, to 515 So. 3rd St., Gadsden, Alabama 35901

Mobile County

Carlin, John T., Jr., present Mobile to P. O. Box 1732, Mobile, Alabama 36601

Coleman, Jack T., present Mobile to 231 Shelton Beach Road, Saraland, Alabama 36571

Greene, John H., present Mobile to 231 Shelton Beach Road, Saraland, Alabama 36571

Jerome, Shepard, present Mobile to 120 Louiselle Street, Mobile, Alabama 36607

Montgomery County

Barnes, Glenn D., present Montgomery to 1415 E. South Blvd., Montgomery, Alabama 36111

Bennett, Willard D., present Montgomery to 2119 E. So. Blvd., Montgomery, Alabama 36111

Hughes, William D., present Montgomery to 2119 E. South Blvd., Montgomery, Alabama 36111

May, William P., present Montgomery to 2119 E. South Blvd., Montgomery, Alabama 36111

Tallapoosa County

Banks, Joseph T., present Dadeville to 207 W. Columbus Street, Dadeville, Alabama 36853

Newman, Lucian, present Dadeville to P. O. Box 218, Dadeville, Alabama 36853

Swindall, Alan J., present Dadeville to P. O. Box 37, Dadeville, Alabama 36853

Swindall, Emma, present Dadeville to P. O. Box 97, Dadeville, Alabama 36853

MEMBER REINSTATED

Lauderdale County

Alexander, William Wallace, b 07, mc Vanderbilt, 31, recip., Tenn. Rt. #4, Big Nance Creek, Moulton, Alabama 35650

MEMBER TRANSFERRED

Coffee County

O'Neal, J. Paul, Medical Arts Bldg., Enterprise, Alabama from member Covington County Medical Society to member Coffee County Medical Society

MEMBERS DECEASED

Cullman County

Woods, Arthur W., Cullman, Alabama, Deceased 4/29/70

Hale County

Anderson, Thomas J., Greensboro, Alabama, Deceased 2/3/70

Houston County

Veale, Norman C., Dothan, Alabama, Deceased 5/23/70

Jefferson County

Lewis, Herbert J., Birmingham, Alabama, Deceased

Lauderdale County

Melson, Gilbert R., Florence, Alabama, Deceased 5/1/70

Tuscaloosa County

Wilson, John W., Tuscaloosa, Alabama, Deceased 4/3/70

Winston County

Blake, Robert F., Haleyville, Alabama, Deceased 3/26/70

Wilcox County

Burson, Elkanah G., Furman, Alabama, Deceased

(Continued on Page 79)

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

Summer time...monilia time!

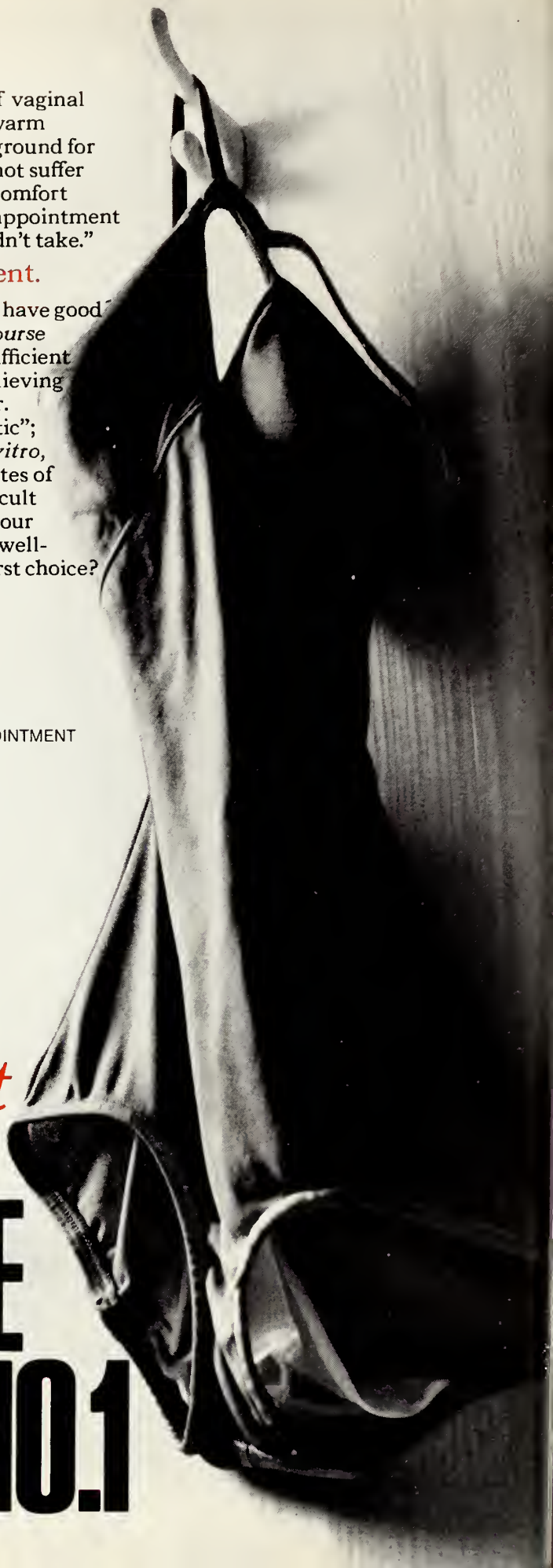
No wonder you see so many more cases of vaginal moniliasis during this season. A damp, warm bathing suit provides a perfect breeding ground for fungal invaders. But your patients need not suffer the pain, the embarrassment and the discomfort of these stubborn infections. Nor the disappointment which comes when they find "the cure didn't take."

Candeptin avoids disappointment.

With CANDEPTIN, you and your patients have good reason for confidence. *A single, 14-day course of therapy* with CANDEPTIN is usually sufficient to eradicate the invader, while rapidly relieving itching, burning, discharge and malodor. And CANDEPTIN is "cidal" as well as "static"; 100 times more potent than nystatin *in vitro*, it has achieved culture-confirmed cure rates of 90% and more (even in notoriously difficult pregnant patients). Why not maximize your chances of success by adopting effective, well-tolerated CANDEPTIN as your agent of first choice?

Agent of first choice

Candeptin®
candicidin VAGINAL TABLETS/OINTMENT



the fortnight fungicide for

PRIVATE ENEMY NO.1

Candeptin® CANDICIDIN

Formula:
CANDEPTIN Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% candicidin activity in U.S.P. petrolatum. 3 mg. of candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain candicidin powder equivalent to 3 mg. (0.3%) candicidin activity dispersed in starch, lactose and magnesium stearate.

Indications:
Vaginal moniliasis due to Candida albicans and other Candida species.

Contraindications:
Patient sensitivity to any of the components. During pregnancy manual tablet insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution:
Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment or Vaginal Tablets have been extremely rare. To avoid re-infection, it is recommended that the patient refrain from sexual intercourse during treatment or the husband wear a condom.

Dosage:
One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet is inserted high in the vagina, twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Dosage forms:
CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil, with inserter—enough for a full course of treatment. Store under refrigeration.

Federal law prohibits dispensing without prescription. CANDEPTIN is a registered trade-mark of Julius Schmid, Inc.

JULIUS SCHMID
PHARMACEUTICALS
New York, N.Y. 10019

(Continued from Page 76)

NEW TELEPHONE NUMBERS

Elwell, H. B., Jr., Huntsville	881-3495
Hyatt, A. J., Huntsville	539-4992
Michaels, Lawrence, Alexander City	234-4223
Montgomery, H. T., Montgomery	288-8580
Morgan, James M., Jr., Birmingham	595-4233
Nichols, Edward T., Mobile	433-6977
Ray, H. C., Huntsville	539-0457
Real, J. D., Dothan	794-4159
Reeves, H. M., Selma	872-0495
Reskof, D. A., Huntsville	539-6739
Semon, John E., Mobile	432-3521
Smith, A. H., Huntsville	539-9663
Warr, L. C., Alexander City	234-4227
Woodworth, Harold C., Tuscumbia	764-5634
Wright, W. H., Sulligent	698-8111

Ulcer Re-lief!

Dicarbosil®
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Hobbies To Fill A Doctor's Leisure

And Boating Wins A Popularity Prize

"Many great rivers bless Alabama with the finest inland waterway system in America," Jo Ann Flirt of Mobile exclaims in her chapter on *Rivers of Alabama*, the book published by Strode of Huntsville two and a half years ago.

And perhaps that is why the question about boating as a hobby, carried in MD, drew the greatest response yet to questions about such hobbies as cooking, stamps, dogs, photography, and politics. Boats call for water, and Alabama happens to have more of it than any other state in the union, with the possible exception of Alaska. And who wants to paddle a canoe or sail a catamaran along the raging Yukon?

Six Mobile doctors acknowledged that boating was their favorite hobby: William A. Box, Van D. Chunn, Jr., Joseph S. Legg, George W. Newburn, Jr., Lloyd F. Pennington, and Rhett P. Walker. Atmore, Decatur and Montgomery were in a three-way tie for second place, with two boating enthusiasts apiece: C. P. St. Amant, Jr., and Thomas H. Robinson, Atmore; John M. Chenault and Arthur A. Stamler, Decatur; James H. French and Julius Pryor, Jr., Montgomery.

With one each came: Birmingham, Joseph M. Dixon; Gadsden, C. F. Beckert; Huntsville, John Wicks, Jr.; Selma, Claiborne Blanton, Jr.; Tuscaloosa, Theodore S. Cone. To introduce them in no particular order:

Arthur A. Stamler, an M. D. from the University of South Carolina, now a Decatur pediatrician, is almost a newcomer to Alabama, a reciprocity transfer from Louisiana. Mrs. Stamler, the former Leona Geismar of Geismar, La., and their five children share his enthusiasm for boating.

ARTHUR A. STAMLER, M. D.

And who wouldn't? Theirs is the 32-foot Island Queen, all-fiberglass houseboat with 210 horses for power, moored conveniently in Decatur Harbor. In it the Stamlers cruise the Tennessee, camping, and using it for a fishing platform, for partying, and just plain going noplace in particular to practice "leisure." It sleeps six or more, has a galley, and all the built-in amenities and necessities, including a bar! In addition, the Stamlers have a 14-foot fiberglass combination fishing and water-skiing rig, powered with a 50 HP Mercury and electric trolling motors for motility. It's on a trailer and is custom equipped.

The Stamler children include 17-year-old twin sons, Michael ("a water-ski nut who heads next year for Northwestern and a journalism course") and Martin ("who likes boating in general and plays a good guitar"); 16-year-old Jo Evelyn ("who enjoys swimming and boys, two activities that complement each other"), 14-year-old Vicki ("wild about water skiing"), and 9-year-old Rebecca

("wild about anything in general, especially pizza, going barefoot, and houseboating").

Dr. Stamler is the new chairman of the Committee on Medicine and Religion for the Medical Association of the State of Alabama.

A ship's surgeon qualified by the Coast Guard for lifeboat duty as a seaman is an individual unique in 20th century ocean history. There's only one of him on record. He is a Birmingham ophthalmologist who, naturally enough, still lists boating as his hobby.

DR. DIXON

It all began for Joseph M. Dixon at the age of 18, working as an ordinary seaman on a coastal coal freighter plying between his native Norfolk, Va., and New Bedford, Mass. This son of a Norfolk dentist, however, was not long satisfied with such short voyages, and in time his trips as an ordinary seaman were extended from New York to Southampton, England, and to Honduras, in Central America. He was already an M. D. when he made voyages from New York through the Canal to the West Coast of South America, with the Grace Line.

Unhappily color pictures do not reproduce well in a magazine using black ink. So much of the photographic record of the Dixons' adventures in recent years cannot be illustrated. These would include, however, weekends water-skiing on Alabama's lakes and rivers, a trip that Dr. Joe and his son Dr. John Dixon made down the Warrior from Birmingham, through the locks to Mobile, Dauphin Island, Destin, Fla., along the Intercoastal waterway and up the Appalachicola and Chattahoochi; experiences with a ski kite; last summer's 300-mile trip shooting the rapids on a rubber raft down the Colorado River through the Grand Canyon for ten days to Lake Meade, accompanied by Mrs. Dixon and their second son Joe with his wife.

By the time this article is published the Dixons will have returned from a 1,500-mile boating trip along the coast of Norway and into the Arctic Circle.

The Dixon family presently numbers eight grownups—Dr. and Mrs. Joseph Dixon, Sr., two sons and their wives, a daughter and her husband. The head of the Dixon household, by the way, is immediate past president of the American Association of Ophthalmology.

Dr. Dixon's associate in the practice of Ophthalmology is Elmar Maria-Josef Lawaczeck, M. D., who happens to be the person riding a kite high above the water in one of the accompanying pictures. The wake beneath him was created by the towing Dixon boat.

DR. LAWACZECK

Born in Germany in 1927, with his M. D. degree from Tubingen in 1954, Dr. Lawaczeck came to this country 12 years later, became an American citizen, and met and married another native German, the former Waltraud Schoenmetzler, who, by the way, has two brothers in medicine, one practicing in Boston, the other still practicing in Germany.

The Lawaczecks have four small children. And they were planning for this summer the trip made by the Dixons last summer, riding the rapids down the Colorado and through Grand Canyon in a rubber raft.

FOR THE DARING, A PART OF BOATING.— Suspended from a kite, skis and all, is Elmar Maria-Josef Lawaczeck, M. D., Birmingham ophthalmologist, tugged along behind and above the boat of his associate, Joseph Moore Dixon, M. D., also a specialist in eye treatment and surgery.

If you'll turn back your Journal file to the December, 1969, issue there's a picture of Dr. Chester Phillips St. Amant, Jr., of Atmore, with a spectacular billfish catch that we were tempted to reproduce here. Dr. St. Amant lists boating as a hobby too, but the picture indicates it is less a toy in pursuit of pleasure than a weapon in pursuit of the big ones!

Others of the seventeen acknowledging boating as their No. 1 hobby were unable to meet deadlines with pictures or articles or both. But this one tops all its predecessors in the series on favorite hobbies.

One Mobile doctor's enthusiasm for boating goes back as far as memory permits, and doubtless beyond. Born in the Mobile Bay area in 1910, George Wesley Newburn, Jr., M. D., has an abiding love of water vehicles, and has owned one or another of them since he was 16 years old. Presently his boat is a 20-foot Glaspar twin engine outboard, C. B. equipped.

DR. NEWBURN

Although a former Major in the U. S. Army Medical Corps, he is also a former member of the U. S. Coast Guard Auxiliary, now a 10-year member of the Mobile Chapter of the U. S. Power Squadron, a past Squadron Commander, active in teaching, and boasting a senior member and JN status.

Dr. Newburn, currently health officer of Mobile County, is married to the former Dorothy Dee of Birmingham, who shares his enthusiasm for boating and fishing. They have no children.

For the last decade, boating has been the recreational choice of Charles Filson Beckert, Gadsden obstetrician-gynecologist. And his liking for it is shared by his two daughters, Susan Page and Ann, both now in college.

Dr. Beckert was born in a Pittsburgh, Pennsylvania suburb on the date of the once famous "false armistice"—on Saturday, Nov. 9, 1918. He received his M. D. degree from Tulane in 1943 and was a reciprocity transfer from Louisiana to Alabama four years later.

Dr. Beckert has a 21-foot Seabird inboard-outboard which rides its trailer to the coast at every opportunity. Both daughters often accompany him.

Alabama Department of Public Health

Administrative Assistants Relieve County Health Officer Shortage

To meet the growing shortage of county health officers in Alabama, recruiting efforts are turning toward non-medical administrative assistants. Dr. W. J. Donald, director of the state health department's Bureau of County Health Services, announced recently the appointment of two administrative assistants and said he expects more to be hired within the next few months.

Alabama has only 18 county health officers and one health administrator at the present time, most of these serving multiple-county districts. Only six counties—Lauderdale, Madison, Montgomery, Jefferson, Mobile, and Tuscaloosa—have established full-time health officer positions. Jefferson and Lauderdale currently do not have a health officer.

Nineteen counties currently without health officer or health administrator are Blount, Calhoun, Chilton, Choctaw, Clarke, Cleburne, Coosa, Cullman, DeKalb, Elmore, Franklin, Jackson, Jefferson, Lauderdale, Marshall, Randolph, St. Clair, Tallapoosa, and Washington. Dr. Donald serves as acting health officer for all these counties except Jefferson. Medical consultants are employed on a fee basis in Chilton, Elmore, Franklin, and Lauderdale counties. They render medical service and give advice on medical problems such as venereal disease, tuberculosis, and chronic illness.

Thomas R. Nielsen was appointed administrative assistant to Dr. Donald in Cullman, Marshall, and Blount counties Feb. 1. John F. Screws has served as administrative assistant to Dr. Donald in Calhoun, Randolph, and Cleburne counties since April 1. Dr. Donald functions as acting health officer and medical consultant in these counties.

The administrative assistant concept is "working well," Dr. Donald said. It has not been necessary to curtail services, he explained, and services have actually improved. "We were relying on local physicians as our clinicians anyway," Dr. Donald noted. The administrative assistants have been accepted "unusually well" by the medical profession, county health department employees, and county governing bodies, he added.

Dr. Donald revealed that the State Board of Health has authorized him to employ regional medical officers. He proposes to divide the state into four regions. The regional medical officer would function as a consultant to all county health departments within the region served by him, and, in addition, he would serve as acting health officer of all counties with health officer vacancies. Dr. Donald said he is looking for very active, experienced, and highly trained physicians to fill the positions of regional medical officers.

The shortage of county health officers developed shortly after World War II, Dr. Donald noted. In the past 15 years, he said, there has never been a time when there was not at least one county without a health officer. The situation has grown progressively worse. At least two more county health officers are slated for retirement within the next year. Eleven county health officers are

over age 60, with the average age being 57 years.

Apparently the principal causes for the lack of county health officers are the shortage of physicians in general and the noncompetitive salaries offered. "Our salary scale is simply not competitive with the income of a physician in private practice," Dr. Donald pointed out.

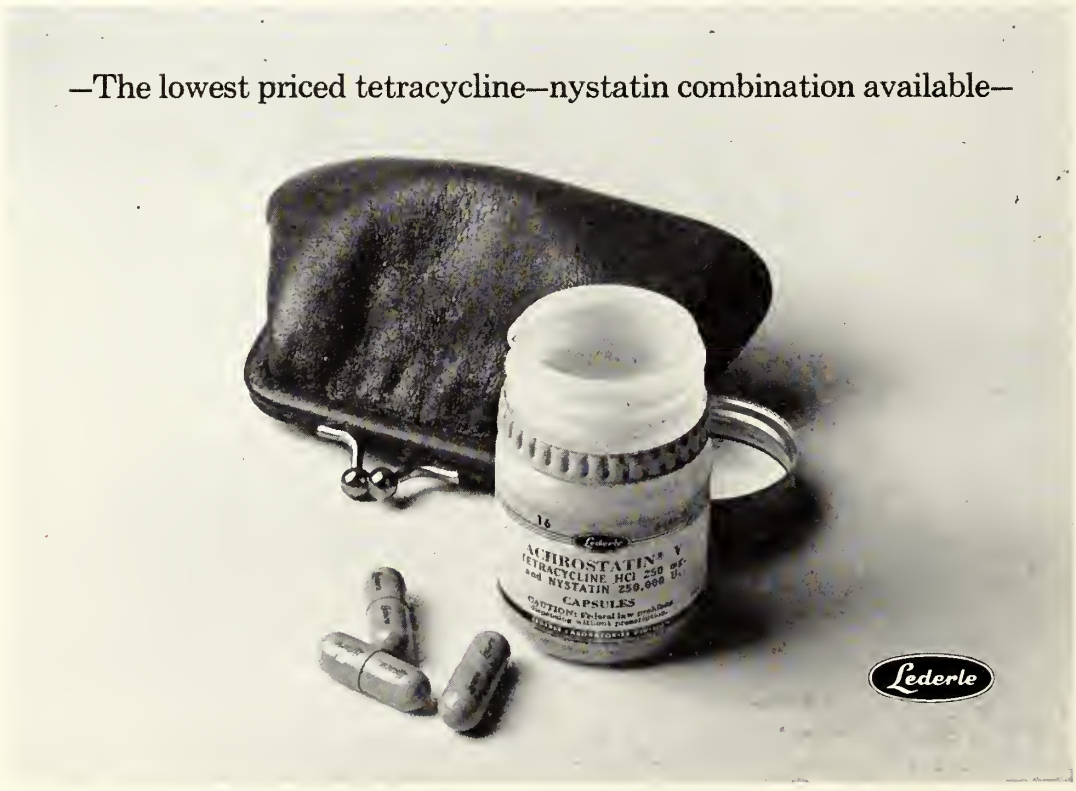
The state health department has abolished the health officer I classification and rarely uses the health officer II classification. The first step of the III classification is $15,834 annually, and the top step of the V classification is $27,443 annually. However, to qualify for a V position, the physician must also have an M. P. H. degree. Most county health officers fall in the III and IV classifications.

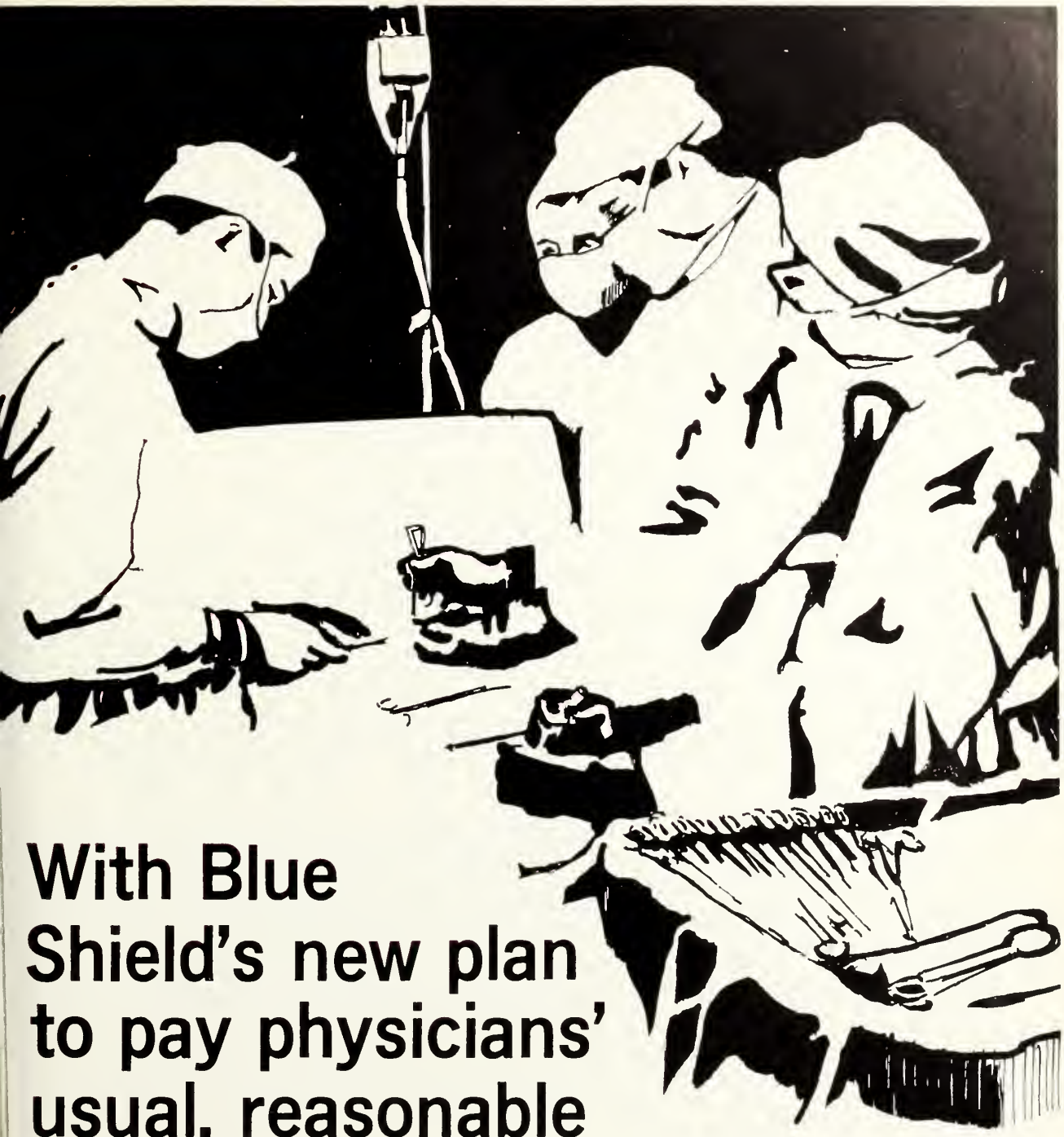
The two administrative assistants already employed are by no means new to public health. Both had been employed as field agents in the state health department's immunization project before their new appointments.

Mr. Nielsen, who is based in Cullman County, was hired as a public health representative in 1966. He was also based in Cullman while working in the immunization project. A Montgomery native, he graduated from Cullman High School. He is a graduate of Clarke Memorial Junior College in Newton, Mississippi, and received a B. S. degree in business administration from the Florence State College.

Based in Anniston, Mr. Screws was also employed as a public health representative in 1966. He is an Anniston native and graduated from Anniston High School. In 1966 he received a B. S. degree in biology and history from Jacksonville State College.

Dr. J. P. Chism, who was appointed health administrator in 1964, was the first nonmedical head of a county health department in Alabama. Dr. Chism holds a doctorate in health science from the University of Alabama. He is the administrator of the Bibb, Hale, and Perry county health departments.





With Blue Shield's new plan to pay physicians' usual, reasonable and customary fees, your patients are far less likely to favor methods of government-controlled health care.

BLUE CROSS-BLUE SHIELD OF ALABAMA

Flying, Fencing, Politics and Surgery Occupy This Doctor

DR. HORACE C. CLAYTON
With His Twin-Engine Cessna

If you'd had occasion to visit Birmingham's Municipal Airport with any regularity in 1930, you might have noticed an eight-year-old boy standing around, wide-eyed, watching the planes take off and land. Any one of several airport attendants might have told you that this was a third-grader who pedaled every afternoon after school the two miles from his home to here.

If he was that much of a flying fan back then, it will be no surprise to learn that today Horace Cunningham Clayton, M. D., in General Practice and Surgery at Pell City, has logged 1200 hours of flying time, 200 of it night flying, in the ten years since he soloed. And if you wonder about the 30 years intervening between his visits to the Birmingham airport and his first flying lessons, don't.

"I mentioned to my father about flying when I was 16 years old and when he finished with me I never mentioned flying again." He took his first flying lesson in February, 1960, and soloed a month later. In the decade intervening he has owned no fewer than six airplanes, currently a Cessna twin engine 310 B.

His eldest daughter, 17-year-old Mary, and his youngest, Leigh, 2½, share their father's enthusiasm for flying, but middle daughter Rae and Mrs. Clayton, the former Joy Alverson of Ragland, are more reserved with their endorsement. Locally they aren't tempted into the air, but on longer air junkets to Florida and elsewhere, they are aboard at takeoff time.

Honors at Columbia Military Academy included his letter in basketball and tennis, serving as captain of the tennis team, and membership on the best drill squad. At Vanderbilt he played varsity basketball for three years and was co-captain of the fencing team. His time in service in World War II included a year at Guadalcanal, and a year on Tinian. He was a tech sergeant at the time of his discharge in 1945, and promptly entered the University of Alabama for his baccalaureate. After two years at Tulane Medical School, his education was interrupted by a death in his family, and for a year he ran a dairy farm, later earning his M. D. degree from Alabama.

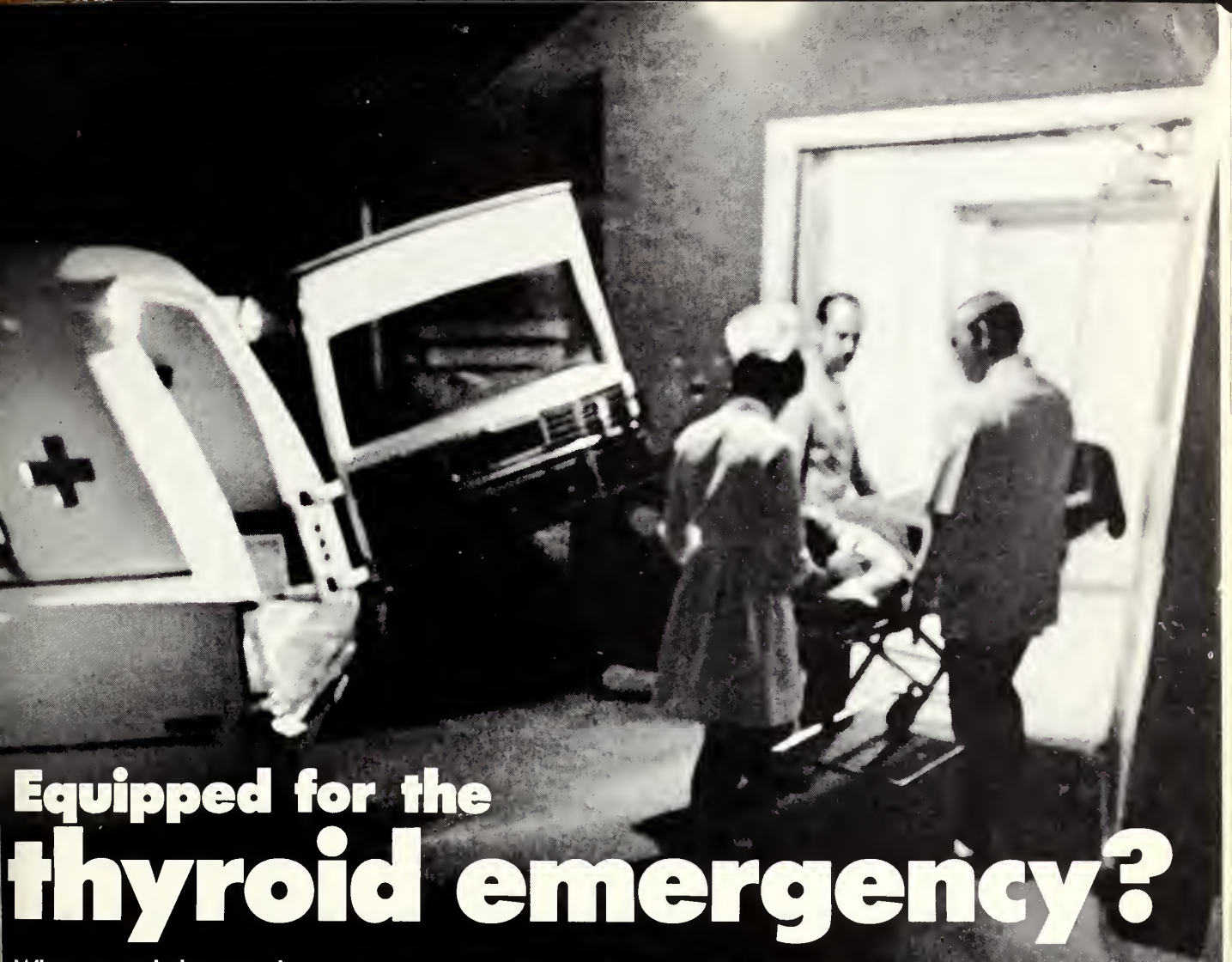
Medicine and flying are not enough to occupy this busy doctor, who has been practicing for 15 years. He is a member of the Pell City Council, a member of the County Board of Health, and of the Park and Recreation Board. And during his leisure he enjoys golf, water-skiing, boating and fishing.

He has decided, so his secretary informs me, that he will not be able to attend the 16th annual meeting of the Flying Physicians Association, being held at the Bayshore Inn, Vancouver, British Columbia, next month, Aug. 23-28.

One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man.

—Elbert Hubbard

—*Minnesota Medicine*



Equipped for the thyroid emergency?

When an ambulance arrives with the unexpected patient presenting the classical picture of myxedema coma, is your hospital suitably equipped? It is if SYNTHROID® (sodium levothyroxine) injectable is at hand. You are also ready to conveniently handle post-operative thyroid medication situations until oral therapy can be reinstated.

In tablet form this single entity synthetic thyroid provides smooth, predictable response for thyroid replacement. An excellent drug for long-term therapy.

But in an emergency, when rapid replacement is needed to sustain life, prompt clinical response is essential. SYNTHROID injection makes this therapy instantly available. Is it available in your hospital?

Levothyroxine has a high binding capacity for serum proteins in contrast to other thyroid medicaments that may contain a thyroactive agent with low binding capacity. *The baund levathyraxine is tatally measurable using the serum PBI test. It is nat unusual to find PBI levels of 8-10 mcg. per 100 ml. af serum.*

INDICATIONS: SYNTHROID (sodium levothyroxine) INJECTION is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. It is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When a patient does not respond to oral therapy, SNYTHROID (sodium levothyroxine) INJECTION may be administered intravenously.

PRECAUTIONS: As with other thyroid preparations, overdose may cause diarrhea or cramps, nervausness, tremors, tachycardia, insomnia and continued weight loss. These effects may become apparent in from 4 days to three weeks. Therefore, patients should be kept under close observation. Medication, in such cases, should be stopped for 2 to 6 days, then resumed at a lower level. In patients with diabetes mellitus, look for possible changes in metabolic activity which may affect insulin or other antidiabetic drug dosage requirements.

CONTRAINDICATIONS: Thyrotoxicosis, acute myocardial infarction.

SIDE EFFECTS: Side effects are secondary to increased rates of body metabolism: sweating, heart palpitations with or without pain, leg cramps, weight loss, diarrhea, vomiting and nervousness. Myxedemataus patients with heart disease have died fram abrupt increases in dosage of thyroid drugs. In most cases, a reductian in dosage followed by a mare gradual adjustment upward will indicate the patient's dosage requirements without the appearance of side effects.

DOSAGE AND ADMINISTRATION: In myxedematous stupor or coma, with no evidence of severe heart disease, 200 to 400 mcg. of SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utillzing a solution containing 100 mcg. per ml. Detectable effects are usually observed by the sixth hour after injection and are fully appreciated during the following day. A repeat injection of 100 to 200 mcg. may be given on the second day if significant improvement has not occurred. The intravenous use of sodium levothyroxine in myxedemataus coma is advantageous because it produces a predictabie increase in the concentration of protein-bound iodine, eliminates the need for multiple doses until oral therapy is reinstated, circumvents the uncertainty of oral absorption, and avoids the risk of pulmonary aspiration.

SUPPLIED: SYNTHROID (sodium levothyroxine) INJECTION is supplied in 10 ml. vials containing 500 mcg. of lyophilized active ingredient and 10 mg. of Mannitol, N.F.; a 5 mi. vial containing Sodium Chloride Injection, U.S.P. is provided as diluent.

Also supplied as SYNTHROID (sodium levothyroxine) TABLET in color coded compressed tablets, and in seven strengths: 0.025 mg. (orange), 0.05 mg. (white), 0.1 mg. (yellow), 0.15 mg. (violet), 0.2 mg. (pink), 0.3 mg. (green), and 0.5 mg. (blue). Each strength is supplied in bottles of 100 and 500 tablets.

Synthroid®
(sodium levothyroxine, FLINT)
Injection

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois

INDEX TO ADVERTISERS

Arch Laboratories	79
Blue Cross-Blue Shield	85
The Bradley Center	77
Breon Laboratories	11
Burroughs Wellcome	66
Campbell Soup	43
Classified	27
Dow Chemicals	65
Conal Pharmaceuticals	46
Eaton Laboratories	59
Flint Laboratories	87
Geigy Pharmaceuticals	68, 69
Guest House Motel	7
Highland Hospital	88
Hynson, Westcott & Dunning	1
Lederle Laboratories	3, 73, 84, 3rd Cover
Eli Lilly & Co.	1st Cover, 28
National Drug	25, 26, 55, 56
Wm. P. Poythress	67
Roche Laboratories	4th Cover
Schering Corporation	13, 14, 15, 16
Julius Schmid	78, 79
G. D. Searle	44, 45
Stuart Company	2nd Cover
Wyeth Laboratories	61, 62

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Hypersensitive individuals should avoid exposure, discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

534-9

anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

for the patient ruled by anxiety

Librium®

(chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, please consult complete product informotion, a summary of which follows:

Indications: Indicated when anxiety, tension and opprehension are significant components of the clinical profile.

Contraindications: Potients with known hypersensitivity to the drug.

Warnings: Coution potients obout possible combined effects with alcohol ond other CNS depressants. As with all CNS-acting drugs, coution potients ogainst hazardous occupotions requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in odministering to addiction-prone individuals or those who might increose dosoge; withdrowol symptoms (including convulsions), following discontinuotion of the drug ond similor to those seen with borbiturotes, hove been reported. Use of ony drug in pregnoncy, loctotion, or in women of childbearing oge requires thot its potentiol benefits be weighed ogoinst its possible hozords.

Precautions: In the elderly ond debilitoted, ond in children over six, limit to smallest effective dosoge (initiolly 10 mg or less per doy) to preclude otoxia or oversedotion, increosing groduolly os needed ond toleroted. Not recommended in children under six. Though generolly not recommended, if combinotion theropy with other psychotropics seems indicoted, corefully consider individuol phormocologic effects, particulorly in use of potentiating drugs such os MAO inhibitors and phenothiazines. Observe usual precautions in presence of impoired renal or hepatic function. Porodoxicol reoctions (e.g., excitement, stimulotion ond ocute rage) have been reported in psychiatric patients ond hyperoctive aggressive children. Employ usual precoutions in treotment of anxiety stotes with evidence of impending depression; suicidol tendencies may be present ond protective meosures necessary. Vorioble effects on blood coagulotion have been reported very rorely in patients receiving the drug and oral anticoogulants; cousal relotionship hos not been established clinically.

Adverse Reactions: Drowsiness, otaxia and confusion may occur, especiolly in the elderly and debilitated. These ore reversible in most instances by proper dosage odjustment, but ore also occasionolly observed ot the lower dosage ranges. In o few instonces syncope has been reported. Also encountered ore isoloted instances of skin eruptions, edema, minor menstruol irregulorities, nouseo ond constipotion, extropyromidal symptoms, increosed ond decreased libido—all infrequent ond generally controlled with dosage reduction; chonges in EEG patterns (low-voltoge fast octivity) may appeor during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occosionolly, moking periodic blood counts and liver function tests advisable during protracted therapy.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

JOURNAL of the Medical Association of the State of ALABAMA

DISPLAY SHELVES

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

28 AUG 1970

IN THIS ISSUE

The Effects of Suntanning 103

Pulmonary Function Testing for the General Hospital and Physician, Part VIII 106

Alabamians Visit Beautiful Mediterranean Playground 123

TES-TAPE®

Urine Sugar Analysis Paper

Snip, dip, compare—that's all

An easy, accurate test-paper method for the qualitative and semiquantitative determination of urine glucose

Additional information available upon request.

Lilly

Leadership in Diabetes Research for Half a Century

Eli Lilly and Company • Indianapolis, Indiana 46206

000118

Francis A. Countway Lib. of Medicine
10 Shattuck St.
Boston, Massachusetts 02115

AUGUST 1970

Equipped for the thyroid emergency?

When an ambulance arrives with the unexpected patient presenting the classical picture of myxedema coma, is your hospital suitably equipped? It is if SYNTHROID® (sodium levothyroxine) injectable is at hand. You are also ready to conveniently handle post-operative thyroid medication situations until oral therapy can be reinstated.

In tablet form this single entity synthetic thyroid provides smooth, predictable response for thyroid replacement. An excellent drug for long-term therapy.

But in an emergency, when rapid replacement is needed to sustain life, prompt clinical response is essential. SYNTHROID injection makes this therapy instantly available. Is it available in your hospital?

Levothyroxine has o high binding capacity for serum proteins in contrast to other thyroid medicaments that may contain a thyroactive agent with low binding capacity. *The bound levathyraxine is totally measurable using the serum PBI test. It is nat unusual to find PBI levels af 8-10 mcg. per 100 ml. af serum.*

INDICATIONS: SYNTHROID (sodium levothyroxine) INJECTION is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. It is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When a patient does not respond to orol therapy, SNYTHROID (sodium levothyroxine) INJECTION may be administered intravenously.

PRECAUTIONS: As with other thyroid preparations, overdose may cause diarrhea or cramps, nervousness, tremors, tachycardia, insomnia and continued weight loss. These effects may become apparent in from 4 days to three weeks. Therefore, patients should be kept under close observation. Medication, in such cases, should be stopped for 2 to 6 days, then resumed at a lower level. In patients with diabetes mellitus, look for possible changes in metabolic activity which may affect insulin or other ontidiobetic drug dosage requirements.

CONTRAINDICATIONS: Thyrotoxicosis, acute myocardial infarction.

SIDE EFFECTS: Side effects are secondary to increosed rates of body metabolism: sweating, heart palpitations with or without pain, leg cromps, weight loss, diarrhea, vomiting and nervousness. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. In most cases, a reduction in dosage followed by a more gradual odjustment upward will indicate the patient's dosage requirements without the appearance of side effects.

DOSAGE AND ADMINISTRATION: In myxedematous stupor or coma, with no evidence of severe heart disease, 200 to 400 mcg. of SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utilizing a solution containing 100 mcg. per ml. Detectable effects are usually observed by the sixth hour after injection and are fully appreciated during the following day. A repeat injection of 100 to 200 mcg. may be given on the second day if significant improvement has not occurred. The intravenous use of sodium levothyroxine in myxedematous coma is advantageous because it produces a predictable increase in the concentration of protein-bound iodine, eliminates the need for multiple doses until oral therapy is reinstated, circumvents the uncertainty of oral absorption, and avoids the risk of pulmonary aspiration.

SUPPLIED: SYNTHROID (sodium levothyroxine) INJECTION is supplied in 10 ml. vials containing 500 mcg. of lyophilized active ingredient and 10 mg. of Mannitol, N.F.; a 5 ml. vial containing Sodium Chloride Injection, U.S.P. is provided as diluent.

Also supplied as SYNTHROID (sodium levothyroxine) TABLET in color coded compressed tablets, and in seven strengths: 0.025 mg. (orange), 0.05 mg. (white), 0.1 mg. (yellow), 0.15 mg. (violet), 0.2 mg. (pink), 0.3 mg. (green), and 0.5 mg. (blue). Each strength is supplied in bottles of 100 and 500 tablets.

Synthroid®
(sodium levothyroxine, FLINT)
Injection

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

28 AUG 1970

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

N THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

■ LUTREXIN, the non-steroid "uterine elaxing factor" has been found to be useful y many clinicians in controlling abnormal terine activity.

■ Literature on indications and dosage avail- ble on request.

■ No side effects have been reported, even when massive doses (25 tablets per day) were administered.

■ Supplied in bottles of twenty-five 3,000 unit tablets.

(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

HYNSON, WESTCOTT & DUNNING, INC. BALTIMORE, MARYLAND 21201

(LTR23)

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • August, 1970 • No. 2

Office of Publication
19 So. Jackson St. — Montgomery, Ala. 36104
Subscription Price — $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. — Montgomery

Managing Editor
L. P. Patterson — Montgomery

Assistant Managing Editor
Mary Nell Williford — Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman — Montgomery
C. Kermit Pitt, M. D. — Decatur
H. H. Hutchinson, M. D. — Montgomery
William L. Smith, M. D. — Montgomery
L. P. Patterson — Montgomery

Officers of the Association

President
S. Buford Word, M. D. — Birmingham

President-Elect
A. E. Thomas, M. D. — Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. — Brewton
J. E. Cameron, M. D. — Alexander City
O. Emfinger, M. D. — Union Springs
Wood S. Herren, M. D. — Birmingham

Secretary-Treasurer
William L. Smith, M. D. — Montgomery

Executive Director
L. P. Patterson — Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. — Decatur
J. P. Collier, M. D. — Tuscaloosa
Paul W. Burleson, M. D. — Birmingham
L. L. Hill, M. D. — Montgomery
M. Vaun Adams, M. D. — Mobile
J. D. Bush, M. D. — Gadsden
E. L. Strandell, M. D. — Brewton
John W. Davis, Jr., M. D. — Montgomery
J. Garber Galbraith, M. D. — Birmingham
H. G. Hodo, M. D. — Fayette

State Health Officer
Ira L. Myers, M. D. — Montgomery

Delegates and Alternates to the American Medical Association

(Terms expiring December 31 of year shown.)

1970
Delegate—E. Bryce Robinson, Jr., M. D., — Fairfield
Alternate—W. E. White — Anniston

1971
Delegate—M. Vaun Adams, M. D. — Mobile
Alternate—E. L. McCafferty, Jr., M. D. — Mobile
Delegate—P. W. Burleson, M. D. — Birmingham
Alternate—Robert Parker, M. D. — Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. — Fairfield
Alternate—W. E. White — Anniston

CONTENTS

President's Page — 92

The Woman's Auxiliary — 94

Editorial Comment — 98

A Young Doctor—And The Image Of Medicine — 98

When Warning Lights Flash and There's No Time To Think — 100

Guest Editorial—Pediatrics, Daniel F. Sullivan, M. D., Mobile — 101

Scientific Section — 103

The Effects Of Suntanning, Robert O. Lauderdale, M. D., Birmingham — 103

Pulmonary Function Testing For The General Hospital And Physician, Part VIII, D. S. Tysinger, Jr., M. D., Dothan — 106

The Month In Washington — 117

Around The State — 122

One Of Ten In 1971's 50-Year Club — 122

Alabamians Visit Beautiful Mediterranean Playground — 123

Fathers And Sons In Medicine — 130

The Doctors R. K. Wilson Of Alabama And Florida — 130

Out Of Kansas Came Senior Of This Doctor Duo — 131

TVMA To Feature Two Alabamians — 132

Hobbies To Fill A Doctor's Leisure — 133

Medicine Ignores Malacology And Misses A Major Hobby — 133

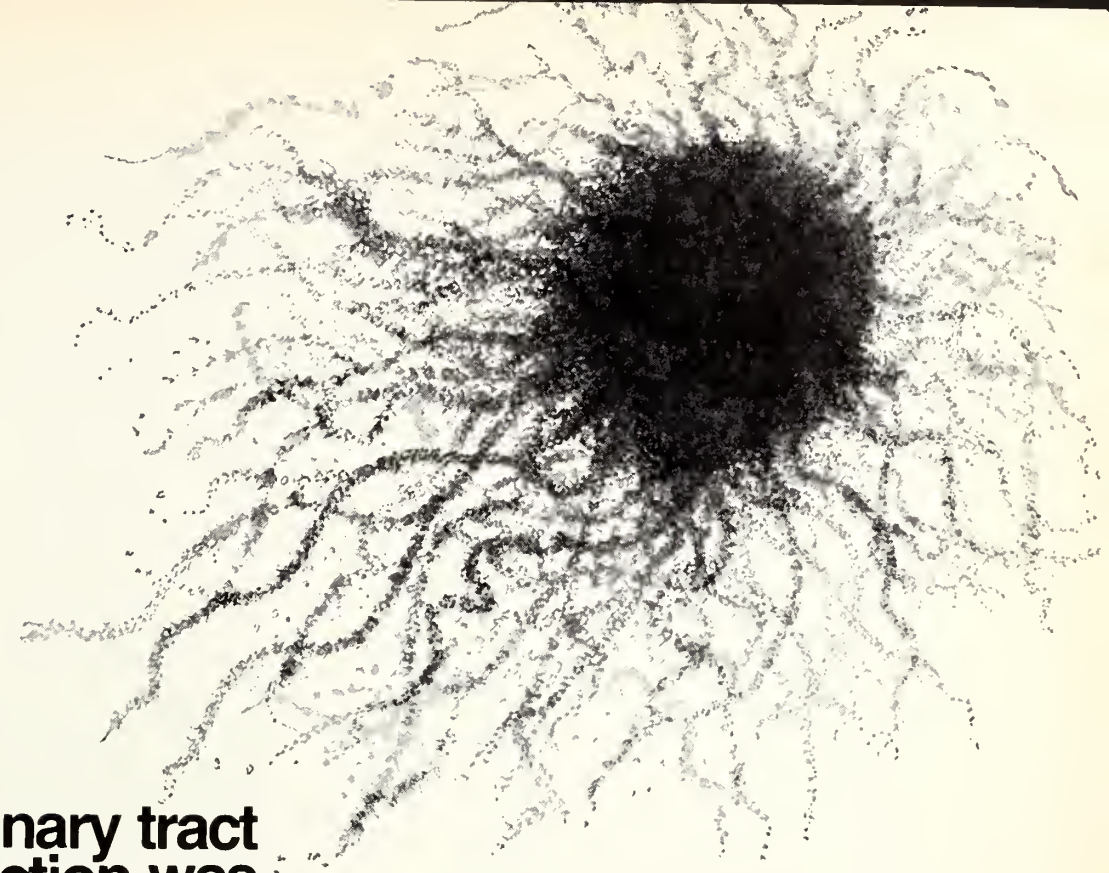
Entire Family Shares Doctor's Enthusiasm For Flying — 134

Doctors Who Play With Fire—R. Marshall Pitts, M. D. — 137

Alabama Department Of Public Health — 138

Hospital "Disposables" Also A Fire Hazard — 138

Physician Placement Service — 140



A urinary tract infection was eliminated last week

ıntestinal monilial overgrowth has appeared this week

For women who are diabetic or debilitated, oral antibiotic therapy often sets the stage for monilial overgrowth in the intestine.

When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

It doesn't let monilia begin where bacteria end. Declostatin® 300

Demethylchlortetracycline HCl 300 mg and
Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN ® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 450-9

President's Page

S. Buford Word, M. D.

MY DRIED-UP ARRANGEMENTS

A few days ago a group of nurses headed for the swimming pool said to me, "Dr. Word, come and go swimming with us. We would like to view your dried-up arrangements." Never have I had my years and perhaps impotence suggested to me so subtly and gleefully.

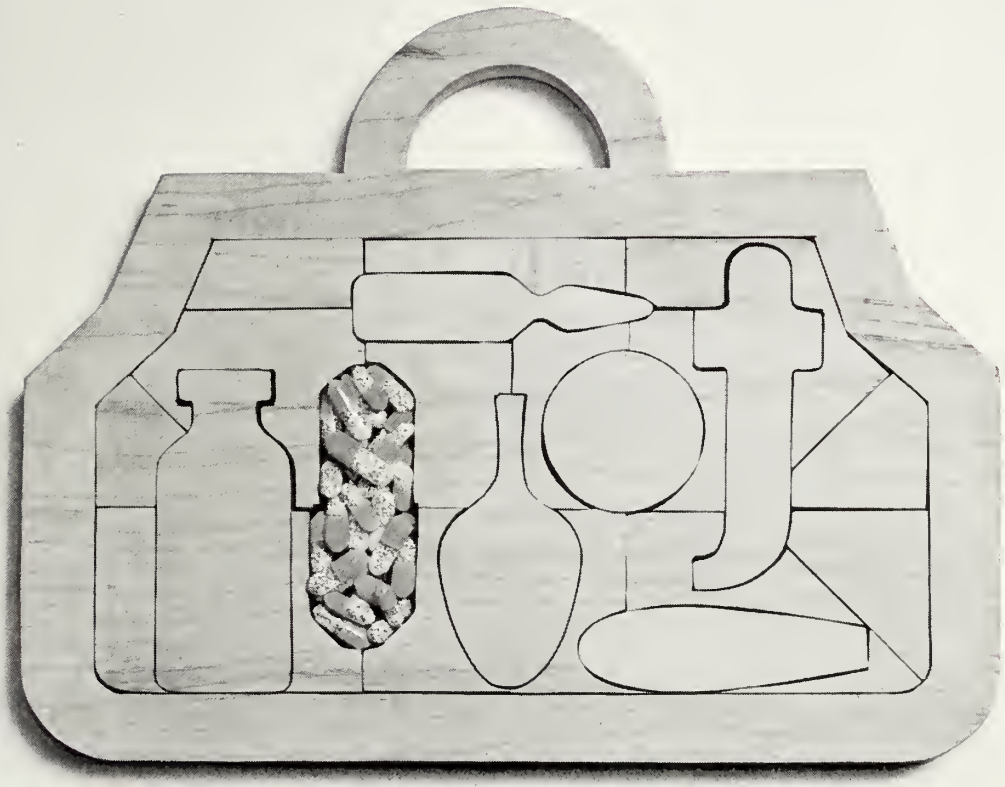
All of which brought to mind the many complaints I have heard recently about the incompetence, mismanagement, languor and perhaps impotence of the American Medical Association. Most of these unfavorable comments came as a result of a news item stating an increase in dues for membership in this organization was imminent.

At the recent annual meeting of the American Medical Association, I viewed firsthand the governing body of this organization in operation. During past years I have gone to many AMA conventions at which I spent my time attending scientific sessions and viewing scientific exhibits. At this convention held in Chicago June 21-25, I spent the time watching the various committes in operation and the governing body (House of Delegates) discussing and taking action on the committee reports. I came away with the feeling that the American Medical Association is a thoroughly democratic organization and that it is not "that Chicago crowd" but it is *you*, the practicing physician somewhere in the United States, all of whom together make up the American Medical Association.

In my opinion, the American Medical Association is the only medical organization that can do for the practicing physicians what the AMA is doing.

This body in session sets the policies for our future professional lives, which no other organization can do. I do not believe the AMA should be faulted for all of the complaints we have against outside interference with the practice of medicine. The type of government sponsored medical care that has developed in the United States during recent years is a part of the revolution that all phases of our lives has undergone. Nothing could have stopped it, at least nothing did, and the new system seems to have not damaged the quality of medical care the new system is developing. It is my impression the American Medical Association is assuming the responsibility of providing the leadership for the medical profession and deserves the support of all practicing physi-

(Continued on Page 97)



One of seven dosage forms

Thorazine®

brand of chlorpromazine HCl

Spansule®

brand of sustained release capsules

Available in 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg. strengths.

Smith Kline & French Laboratories
Philadelphia, Pa. 19101

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

The 47th Annual Convention of the Woman's Auxiliary to the American Medical Association held at Chicago's Drake Hotel June 21-25 was attended by approximately 2,000 members. Mrs. John Chenault, President, presided over the sessions. Alabama's full quota of delegates was present: Mrs. Ben Johnson, Chairman, Bessemer; Mrs. William L. Smith, Montgomery, Mrs. M. Vaun Adams, Mobile; Mrs. E. Bryce Robinson, Birmingham; Mrs. Julius Michaelson, Foley; and Presidential delegate, Mrs. Howard C. Johnson, Sheffield.

Each representative of Alabama took great pride in many facets of the convention. First, and foremost, was "Belle's" beautifully planned and well executed agenda despite threats of outside interference. In Auxiliary Membership increase among the 50 states, Alabama was second. Georgia was first with 400 new members. Alabama also placed second in the Southern Region contributions to AMA-ERF—$19,108.25. Tennessee was first contributing $25,061.17. The goal of WA-AMA this year was to raise ½ million dollars for AMA-ERF. The check Belle presented to Dr. Robert C. Long, President, AMA-ERF, was $498,950.69 only $1,049.31 short of an unprecedented yearly goal. I know you are as proud of these recognitions Alabama received as is your Auxiliary.

Among the outstanding speakers during the Auxiliary meetings and luncheons were: Dr. Gerald Dorman, President, American Medical Association, whose topic was, "What Is So Rare As This Day In June?"; Mrs. Louise Bushnell, Director, Women's Activities National Association of Manufacturers, whose topic was, "Challenge to Women in the '70's"; Dr. Fred L. Allman, Jr., member of AMA's Committee on Exercise and Physical Fitness, and past President of American College of Sports Medicine; and Dr. Tenley Albright, former U. S. Olympic Figure Skating Gold Medalist (1956), and Silver Medalist (1952).

Mrs. Howard C. Johnson

After Tuesday's luncheon honoring Past Presidents and Honorary Members, we were privileged to see a beautiful pageant of fashions down through the ages with original and authentic reproductions of costumes, hair styles, jewelry, and accessories from different countries of our world. The program, "Woman Through History," was presented by the sponsors of the Kenosha (Wisconsin) Homemakers Home Health Aid Service, Inc.

(Continued on Page 97)

The girth control pill

Tepanil® Ten-tab

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libida, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended

T-006A / 1/70 / U S PATENT NO 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nacturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps In some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

Q915A 1/7

(Continued from Page 94)

State and National reports, called "Idea Exchange," are always interesting and informative. Each state was asked to report on *one* major project. Ruth Johnson's report on the MIST program received resounding applause.

On Wednesday, April 24, Mrs. R. C. L. Robertson of Houston, Texas was installed as National President for 1970-71. Her theme is "Service in the '70's" with accent on "The Responsibilities of the Adult Woman." The National theme is similar to our own state's theme, "Service To Others." Mrs. Robertson has presented a challenge to the nation's auxiliaries. Rest assured your Auxiliary accepts the challenge—with responsibility.

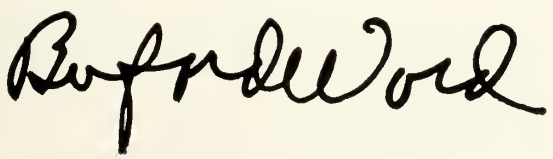
Camille Johnson

PRESIDENT'S PAGE

(Continued from Page 92)

cians in the United States. Alabama is well represented on the Board of Trustees, Councils and other important committees and we as practicing physicians should support these members of our Association who are devoting their time for our best interest.

To drop your membership in the American Medical Association is akin to denouncing motherhood. It is severing ties with the one organization that is potent enough to speak with a persuasive national voice. If there is a great increase in Alabama of physicians who drop their membership in AMA, it will cause the Medical Association of the State of Alabama to develop *dried-up arrangements* and perhaps a degree of impotence.



S. Buford Word, M. D.

painless intramuscular therapy for calcium deficiencies:

Calphosan®

calcium glycerophosphate, calcium lactate

To bring effective calcium therapy to the patient, Calphosan may be administered intramuscularly . . . without pain, inflammatory reactions, induration or sloughing. Injections twice weekly for a series of 5 to 10 injections are recommended.

Average dose per injection: One or two 10 ml. injections of Calphosan each week for the first four or five weeks, and on a when-needed basis thereafter.

Calphosan is a specially processed solution of calcium glycerophosphate and calcium lactate, containing 1% of each, in a physiological solution of sodium chloride. Each 10 ml. contains 50 mg. of calcium glycerophosphate, 50 mg. calcium lactate, with 0.25% phenol as preservative. Available in 10 ml. ampules in boxes of 10s and 100s; 60 ml. multiple-dose vials. Also available as Calphosan with B-12. U. S. Patent No. 2657172.

Contraindication: Hypercalcemia; neoplastic diseases; and fully digitalized patients. Do not use intramuscularly in infants and young children. Before starting therapy, consult complete product literature.

Write for free copy of "Calcium: The Ubiquitous and Essential Element" and for samples.

THE CARLTON CORP

Tenafly, New Jersey 07670

Editorial COMMENT

A Young Doctor—And The Image of Medicine

When Medicine is the subject of a best-seller, it is the concern of every doctor in the land.

Five Patients, by Michael Crichton, M. D., just published by Alfred Knopf of New York, is such a book. It automatically leaped into the best-seller lists when it became a selection of the Literary Guild. It has received rave reviews in top magazines. It'll be read.

Between the book's foreword and afterword, five case histories serve to introduce as many facets in the operation of a huge modern hospital, Massachusetts General, a complex with its 21 buildings, its 1,000 beds, its student saff of more than 800, and its three sometimes coordinating, sometimes conflicting concerns: patient care, teaching, and research.

The first patient was rushed into emergency after a construction accident. His heart had stopped beating. The case history served to illustrate public relations in such a situation.

The second patient, brought in with a burning temperature of 108, illustrates the staggering cost of hospital care. It also serves as a launching pad for Dr. Crichton's indictment of the American physician in general and AMA in particular for "gross irresponsibility in nearly all matters relating to the cost of medical care." He quotes the embittered Dr. John Knowles.

The third patient is brought in with a nearly severed hand, and a team of six surgeons works six hours to reattach it, permitting a broad look at the history of surgery, of anesthesia, and of antisepsis.

Patient No. 4 is a woman taken suddenly ill on a Boston-bound plane, and she illustrates the brand new procedure of diagnosis over closed-circuit TV in the hospital's Logan Airport Medical Station; where the doctor is a mile and a half away from his patient.

And the fifth and final patient, a woman suffering from a rare disease, *lupus erythematosus,* demonstrates the benefits—and the drawbacks—of being a patient in a teaching hospital.

The young author, who received his M. D. degree after publication of his earlier fiction success, *The Andromeda Strain,* is here writing brilliantly—and acidulously!—out of his personal experience. He subtitles his new book "The Hospital Explained."

He makes astute observations, such as: "It is a peculiarity of the American mentality that the growth of almost anything is applauded. (Consider the mindless jubilation that accompanied the growth of our population to two hundred million.)"

And the fact that his awe occasionally shows through the acid detracts nothing from it.

—M.

(Continued on Page 100)

relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

(Continued from Page 96)

When Warning Lights Flash And There's No Time To Think

Attention, please. Code Blue!

To most patients and hospital visitors it is simply a part of the medical mumbo jumbo that surrounds them in this realm of the sick and disabled. Even the intoned repetition of the call fails to impress itself on the average consciousness.

The only thing that will impress the layman is a sudden change in accustomed routine; the invasion of the unexpected. Perhaps a nurse races down the hall. Maybe a doctor breaks off a casual conversation to hurry from the sickroom.

Most emergencies everywhere never come to the attention of the unitiated. Deliberately so. The panic of those who have no part in it can contribute nothing to the solution.

When one of the big jets takes off with its load of strapped-in passengers and begins its climb toward the stratosphere, it is the practice of a stewardess to take the microphone, make a little welcoming speech, and explain the part that the passengers must know in emergency procedure. Other stewardesses are stationed up the aisle to illustrate as the speaker tells how to don a life vest, how to attach an oxygen mask.

The vests are usually stowed under your seat. The oxygen masks are in individual compartments that open automatically when there is a malfunction in the cabin's pressurization. Only when something goes wrong in these compartments and they plop open are the passengers startled out of their apathy.

The dangers that surround us are carefully concealed.

Someone said once: "Watch an experienced airplane pilot when he is a passenger on another's plane. Notice how tense he is at takeoff. His hands are white from gripping the arms of his plane seat. His eyes stare straight ahead. He holds his breath. He is obviously tied up in knots. He knows the crisis of the takeoff."

Fortunately, ordinary passengers share none of his concern. They know their pilot is a veteran who must pass the most rigid tests of physical welfare, mental alertness, and competence to qualify for his job. Their experience and imagination do not picture the control panel at takeoff time.

Nothing will show as the pilot and co-pilot take one last look from the seats in which they are strapped, nod agreement, open the throttles, and quiver to the roar of four powerful jet engines as they start their cumbersome craft hurtling down the runway to flying speed.

Only at that moment does the warning light flash on the instrument panel. The craft is just at the point of no return. The pilot must make a split-second decision, either to try to stop or to ignore the warning until his ship is airborne.

It happened on the takeoff from Bangor, Maine, with 250 Alabamians aboard. And the pilot of the mighty Super DC 8 made his split-second decision. The engines hesitated and roared into reverse. The flaps slid smoothly from their wing berths. The brakes were applied cautiously. And the big ship shuddered to a stop near the end of the two-mile-long runway.

The pilot laughed it off. "No extra charge for this," he quipped. "A door came ajar and activated the warning light. Everything's okay. We'll take off in the opposite direction." Which we did!

But there were a few whose faces remained unnaturally white for some time afterward. One was a Montgomery doctor whose sister-in-law had been aboard another mighty jet taking off from Orlie airport in Paris some years ago. The pilot failed to "abort" that takeoff and none survived.

Ironically, with the Montgomery doctor, his wife and daughter at the time of the "scrubbed" takeoff at Bangor, was his niece whose mother had been aboard the Air France Boeing 707 that failed to make it.

Attention, please. Code Blue!

GUEST EDITORIAL

PEDIATRICS

The phone rang the other day and a worried mother excitedly stated "They are giving the 'rebellion vaccine' at school and do you, as pediatricians, recommend the rebellion vaccine?"

This furnishes us food for thought and possibly some pains of anguish. How much "rebellion vaccine" have we disseminated? A little over 25 years ago we were just ending a period of regimentation in which every child was to perform as a machine, take four oz. of milk every 4 hours, and perform on schedule. Mothers, with their love and wisdom, soon rebelled against the dictatorial edicts of the pediatrician. This resulted in the "permissive" school in which the child was allowed to do whatever he desired without any direction. Today we seem to be reaping the effects of lack of authority. All is questioned and the need for it denied.

Have we helped to instill this lack of respect for authority by omitting to emphasize to mothers that if all children are to thrive and develop emotionally, they must have the "Three L's"—**L**ove, **L**imitations, And **L**et them grow up.

The infant must have love if he is to develop his self-image. This abundance of love is the backbone of his security. Love does not mean smothering with affection, but expressing yourself in your true feelings for the child.

Just as important as love is **L**imitations. As a child grows, develops, and encounters each new experience, he needs limitations to guide him. Limitations that are set with love and observed with consistency. If a child is to learn by each experience he must have satisfactory base lines, which are the limitations set for him by his family. Once he has developed beyond the stage of limitation set by family restrictions, he will be comfortable using self-imposed limitations, which are his limitations imposed because of his early foundation.

If the child has had love and limitation, then he is let grow up. He is encouraged to make decisions he is ready to render. The child that is ready for toilet training is encouraged. The teenager that begins to go with the opposite sex should be able to go forth confident in his self esteem and capable of placing limitations himself without interference from an adult.

In this age when the need of authority is seriously questioned, let us hope that as children's physicians we can guide parents to impart to each child that a just authority is the essence of any society that is to succeed.

—Daniel F. Sullivan, M. D.
Mobile, Alabama

VA HOSPITAL,
MONTGOMERY, ALABAMA

ORDER NO. 1874
DATED MAY 21, 1970

WANTED: Physician, Urologist or Orthopedist, in Surgical Service of 253 bed GM&S VA Hospital. Salary based on qualification and experience. An equal opportunity employer. Reply to F. S. Apringall, M. D., Chief, Surgical Service, VA Hospital, Montgomery, Alabama 36109. Tel.: Area Code 205, 272-4670.

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

THE JOURNAL
of
THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
Published Under the Auspices of the Board of Censors

Volume 40 August, 1970 Number 2

The Effects Of Suntanning

Robert O. Lauderdale, M. D.

"In the spring a young man's fancy, lightly turns to thoughts of love." In the warm summer, young and old alike, think of the pleasures to be enjoyed in the great out-of-doors. This results in extensive exposure to sunlight and its consequences.

In this day of rapid transportation and relative availability of resort areas, sun exposure has become a year round concern, however, generally it is of more concern in the summer months. While for some, the sun's browning effects are not to be desired, for others a good tan becomes the brown badge of leisure and a status symbol.

Not everyone reacts the same to the effects of the sun and few take time to consider the consequences. For the persons with a very fair complexion, white skin, blonde or red hair, and blue eyes, the sun exposure may offer little or no tan but instead produce a severe "sunburn." The albino doesn't tan at all and should avoid the sun entirely. Persons with dark skin, "olive complexion" and dark hair (brunette, etc.), have a tendency to tan with ease. However they too, may become sunburned if the initial exposures to the sun are in excess.

Not all the sun's rays produce tanning! Simply the sun's rays can be divided into infra-red, long and short ultra-violet light rays, etc. The infra-red rays play little or no part in sunburn and are screened out by clouds. If a person is "sunburned" however, the presence of infra red (heat rays) serves as a warning since it will make the person uncomfortably aware that he has become burned. Heat from any source will do this. Thus the cliche' "you can get sunburned on a cloudy day," for the ultra violet rays which produce sunburn are not screened out by clouds and produce their effects on the unsuspecting sunbather. A strong wind also aggravates sun exposure and makes one feel cool and unaware of the presence of ultra violet light.

Ultra violet light varies in its effects on the skin also. The shorter wave length, ranging from 2900 A°—3200 A° are erythemogenic rays and produce the uncomfortable effects of sunburn. These may produce melanin but mainly produce erythema, edema, increase in skin temperature and may produce malaise, chills, fever and result in serious consequences. These rays may be blocked by sunscreens.

The longer wave lengths (3400 A°—4000 A°) are the "fun rays" and produce most of the desired tan. Even so the slant, or angle of the sun is important. This allows for less exposure in the early morning and late afternoon while maximum exposure is in mid-day. Pigment must be present in the skin for a tan to develop to these rays and this is called the Meriowsky effect. Such areas can be noted to be deeper in color in

Dr. Lauderdale is President of the Alabama Dermatological Society, instructor Department of Dermatology at the University of Alabama School of Medicine, and consultant, Department of Dermatology, Lloyd Noland Hospital.

as few as eight hours after exposure. Naturally freckles tend to get darker than the surrounding skin for this reason. Most sunscreens fail to prevent the Meirowsky effect and allow some tan without sunburn or serious consequences.

Prolonged and excessive exposure not only cause initial discomfort, blistering and peeling but dryness and premature aging of the skin. Aging of the skin has been noted as early as age ten and the effects are accumulative each succeeding yearly exposure to sunlight. Exposed skin shows changes not seen in covered skin and most of the precancerous and cancerous changes in the skin occur on the sun exposed areas, i.e. face, ears, neck, "V" of neck, forearms and hands. These changes are noted more in farmers, sailors, construction workers, etc. Reflected light from water, sand and even snow continue to exert its effect. Thus one might become sunburned under a beach umbrella, on a covered boat or under a shade tree.

Certain medicines produce desired and undesired effects in the presence of sunlight. These are characterized by increased photosensitivity, photo-toxic drug eruptions and photo allergic reactions. The list of drugs which do these things is long and includes many common, everyday medicaments, i.e. antibiotics, antidiabetic drugs, antihistamines, diuretics, sulfonamides and tranquilizers. Reactions can be severe at times. Demethylchlortetracycline (Declomycin®) is a good example. These products should be avoided when sun exposure is expected. A most efficient stimulus to pigmentation may be enhanced by photosensitizing agents such as the psoralen compounds, particularly trimethylpsoralin (Trisoralen®) and methoxasalen (Oxsoralen®). These chemicals markedly enhance the effect of the longer wave length (tanning rays) of the sun. Thus they have been called suntan pills. While they will expedite a suntan when used with caution, they were developed for hypo-pigmentary disorders and are best reserved for these conditions (vitiligo, etc.)

"Suntan" lotions and creams are little more than chemical parasols and serve to protect the individual from varying degrees of sun effect. The list is long and varied. Most are pleasantly scented and lubricating. A few contain dihydroxyacetone which combines with the stratum corneum to produce an artificial caramel color and which offers *no* sun protection at all. This color develops "with or without the sun" and was introduced in Man Tan and later in Q. T. and Sea & Ski Indoor/Outdoor lotion and others. This has a tendency to streak and sheds with the corneum leaving a "dirty" appearance if not maintained. Stains such as iodine and skin coloring agents offer no protection.

The sun's drying effect can be minimized by applications of lubricants. A few of these are Sea & Ski tanning butter, cocoa butter, mineral oil, baby oil, peanut oil, sesame oil and numerous others. Dryness has a tendency to make the effects of aging of the skin evident i.e. wrinkles, coarseness and leathery appearance. However lubricants do little to reverse these changes since they are a result of changes in the dermis which are cumulative and permanent. These effects remain after suntan fades.

Some sunscreens which permit tanning but offer little protection are: Avon Sun Safe, Braggi Sun Bronzing Gel and Oil, Sun Block Stick, Bronze Lustre Moisturizing Tanning Gel, Sun Stick Cream, Bronztan Cream Lotion, Coppertone Suntan Cream, Revlon Sun Bath Moisturizing Tanning Cream, Sea & Ski Lotion and Oil, Sundare Clear Lotion, A-Fil, Q. T., and Tranfastic Dark Tanning Lotion and Oil.

Those which block sun and allow little or no tanning are: Block Out, Solbar, SunGard and Uval. In addition to these are physical barriers which includes opaque cosmetics, R. V. P., and products containing zinc oxide, Titanium-dioxide and bismuth subcarbonate. However, mixtures of these are not always cosmetically acceptable.

If a suntan is desirable one should be practical and follow these simple steps: (1) Short

exposures, initially in early morning and late afternoon i.e. 15 minutes or so to just get pink, (2) Avoid mid-day sun until tan is established, (3) Increase time interval daily; pain is a warning of over-exposure, (4) Be as cautious on a cloudy day as on a bright, sunny day, (5) Apply suntan lotions which allow tanning before exposure and re-apply after swimming, (6) Caution not to over expose just because suntan lotion is applied, (7) Keep well lubricated after exposure to avoid dryness (however peeling will occur if any blisters form), (8) Apply a soothing lotion if pain is present i.e. solarcaine or similar products containing menthol, phenol, camphor or benzocaine in lubrication lotions, (9) Areas which blister usually do not tan and should be treated with caution as initially and (10) Do not lie in sun and "bake." This does more harm than good.

Summary: (1) Most of the sun's effects are more harmful than beneficial, (2) A good suntan can be developed with frequent, mild, short exposures with minimal side effects, (3) Sunscreens help to prevent serious sunburn while permitting tan when properly used and (4) "Suntan pills" should be used with Caution.

Books Of Interest To Doctors And Patients

PORTRAIT OF INDIA, by Ved Mehta, Farrar, Straus and Giroux, New York, xi plus 544 pages, indexed—$12.95.

India, a land mass less than half the size of the United States but packed with one sixth of the world population, is still virtually unknown. And yet all the problems that have troubled India for years are lately becoming problems to trouble and frighten the entire earth.

In more than 550 pages of text, untroubled by illustrations, this native of India educated in the West, presents an unforgettable "portrait" of his native land that will prove alike absorbing reading and invaluable reference, in which physicians and those in related fields will find particular interest.

The author, born in Lahore, one of seven children of a Hindu doctor who was an officer in the Health Services of the Indian Government, was educated in schools in the United States and England—high school in Little Rock, Pomona College and Harvard, Balliol and Oxford.—M.

Money will buy a fine dog, but only love will make him wag his tail.

—*Ulster Post*

I have but one lamp by which my feet are guided, and that is the lamp of experience.

—Patrick Henry.

Why did Nature create man? Was it to show that she is big enough to make mistakes; or was it pure ignorance?

—Holbrook Jackson.

Life is a measure to be filled—not a cup to be drained.

—Fifth Wheel.

Pulmonary Function Testing For The General Hospital And Physician

D. S. Tysinger, Jr., M. D.
Dothan, Alabama

VIII. PH, BLOOD GAS, AND DIFFUSION

By use of the term "blood gases," we are speaking specifically of oxygen and carbon dioxide. The concentration of the pH depends to a great extent on the amount of air reaching the alveolus, the amount of blood circulating this same alveolus, and the permeability of the membrane between the alveolus and the capillary as well as other difficulties that may occur including poor interpulmonary mixing of air.

The techniques of arterial puncture will not be described but arterial blood is drawn anaerobically for testing. These are several laboratory methods of evaluating blood gases, but these will not be discussed at this point. The aim in the treating of lung disease is to keep the pH at a normal level between 7.35-7.45; the arterial PCO_2 between 35-45 mmHg.; the arterial oxygen saturation between 80-100mmHg.

Events occurring at the alveolar level are of utmost importance since this is where blood gas exchange occurs. In the first of this series of articles, entitled "Clinical Oxygen Patient Relations," the alveolus and the gas contained therein was described as if it were a static unchanging gas with unchanging constituents the same as the air around the body. This is not the case. The bronchi get progressively smaller until the terminal airway where the respiratory bronchioles get larger and connect to the alveoli. At the level of the respiratory bronchioles and on to the alveoli, the tubes are getting larger and the air, having passed the smallest point, is continually slowing so that the lateral pressure is increasing and turbulence is also increasing in these areas. Thus, as air entering the alveolar areas mixes with air within the alveolus there is dilution, turbulence, etc., and thereby fresher air is maintained at the alveolar level. As the lung decreases in size with expiration, the air in the alveolus is the last to be expelled and, since the terminal portion of expiration is alveolar air, then the air remaining in the dead space is also alveolar in constitution.

With the next inspiration there is a filling of the alveolus first from the air still remaining in the dead space which is still alveolar, then with fresh air from the outside as it enters and mixes with the remaining air. For this reason, from mid-expiration roughly to early inspiration, the air in the alveolus is different, due to the constant change of gas in the alveolus. During this phase while blood flows by the alveolus, oxygen is extracted, CO_2 equilibrates, and volume decreases. During this same phase of breathing, the smaller alveoli in the mid and inner portions of the lungs (due to the surface tension and smaller size as was discussed in the previous issue) will empty into the larger peripheral alveoli producing a continuous flow which keeps up turbulence in the alveolar level and keeps as much fresh air as possible next to the alveolar membrane.

In normal breathing not all alveoli are ventilated. If they were there would be no inspiratory capacity. These alveoli must have some pulmonary artery blood passed through them. It is the bronchial artery supply to these alveoli which are not aerated that makes up the five to 20 per cent of bronchial artery blood flow that does come back through the pulmonary vein. The pulmonary artery blood supply past these areas represents a normal physiologic A-V inter-

pulmonary shunt. This being the case, it is easy to visualize in the normal that, on inspiration, as outside air mixes with the alveolar air there is dilution and CO_2 drops. Oxygen pressures go up so that for a brief period the CO_2 may be as low as 20-30 mmHg. and oxygen as high as 120 mmHg. At the end of expiration the CO_2 level drops to 40-45 mmHg. and oxygen may decrease to 70-80 mmHg. Thus, at the alveolar level there are constantly changing gas levels and those usually spoken of are average for the full period of inspiration and expiration. The blood mixes going past these alveoli and keeps a fairly constant pH, PCO_2, and PO_2 level of arterial blood that goes out to the body.

The second factor that must be visualized in connection with this discussion is the fact that blood will pick up only 1.34 cc. of oxygen per gram of hemoglobin and will only take up 0.003 cc. of oxygen per mmHg. per 100 cc. of blood physically dissolved. Therefore, the rate of exchange from alveolus to blood and the rate of lowering of alveolar oxygen level is directly dependent on the total volume of hemoglobin and plasma passing the alveolus. An alveolus without blood supply would remain with the same gas levels as on inspiration. One that is heavily circulated would continue to take up oxygen as long as there was sufficient alveolar pressure to drive it across the membrane. The carbon dioxide level of the alveolus, however, is dependent on the blood level, not the alveolar level. If the pulmonary artery blood has only 45 mmHg. entering the capillary bed and the alveolar level is 45 mmHg. of CO_2 then they are equal already and there will be no carbon dioxide exchange and the blood will leave without giving up any carbon dioxide. In a non-ventilated alveolus, as oxygen is taken up by the blood stream, the volume of carbon dioxide is not changing and is, therefore, relatively increased. This relative increase in pressure will then cause carbon dioxide to flow back into the blood stream. As this occurs in the alveolus that is poorly ventilated, there is an ever-changing flow of oxygen and CO_2 being taken up by the blood. This continues to fluctuate back and forth. In the process alveolar volume steadily decreases towards collapse.

Nitrogen is also disproportionately increased and also equilibrates so that it, too, is removed from the alveolar space but at a much slower rate than that of carbon dioxide and oxygen. For carbon dioxide to rise in the blood, carbon dioxide must rise generally throughout all the alveoli so that there is a higher alveolar level than there is in returning venous blood. At this point the carbon dioxide level in the blood will slowly increase until it is equal to and surpasses that in the alveolus. This is reflected back into the interstitial fluid where the interstitial fluid carbon dioxide level must rise sufficiently to be higher than that in the blood. The cellular carbon dioxide level must rise sufficiently to be higher than that in the interstitial fluid to again cause a normal transfer of CO_2 from the tissue cell through the interstitial fluid to the blood stream and into the alveolar space at which point it is delivered to the outside by breathing. If the breathing mechanism is inefficient the carbon dioxide rises until an equilibrium is again reached at which point carbon dioxide produced by the tissue cells is delivered to the lungs and ventilated off at a rate equal to that at which it is produced.

In relation to ventilation and circulation; as inspiration progresses there is a progressive increase in blood flow through the lungs to the pulmonary capillary bed and through the pulmonary capillary bed. As expiration begins there is a progressive decrease of blood flow through the pulmonary capillary bed so that when the blood gases are lowest there is the lowest blood flow with the least extraction of oxygen and return of CO_2.

Alveolar turbulence is an important factor in maintaining gas exchange. As inspiration finally ceases and expiration has not yet begun to occur, the elasticity of the lungs seem to bounce towards contraction against the fixed but no longer expanding chest cage to produce what is known as elastic

recoil. This bounce or "popping" causes turbulence in the alveolar area throughout the lungs. This same phenomenon occurs at the end of expiration. On studying pneumotacographs it is noted that, in the normal individual, as a pneumotacograph is recorded each breath is individual and different from each other breath. During the full breath the base line is routinely jagged which apparently is due to the unequal and elastic popping of the small portions of the lung through inspiration and expiration, this causing continuing turbulence in the alveolar areas during both inspiration and expiration. As lung disease develops, particularly those of obstruction and loss of elasticity, in which more force is required for inspiration and expiration, then the breathing patterns become prototype and these little irregularities are ironed out to a straight line. In these individuals this elastic property that causes turbulence and helps to keep the highest concentrations at the alveolar membrane level are lost and breathing becomes much more inefficient.

One final generalization as pointed out in "Oxygen Patient Relations" and "Carbon Dioxide Patient Relations," is the fact that the only two variable components of alveolar air that can change while breathing room air are the oxygen and the carbon dioxide content. As one increases the other, of necessity, reduces. Due to the position of the oxygen dissocration curve at body temperature and usual blood pH, great fluctuations in alveolar oxygen tension can occur with relatively little effect on the hemoglobin per cent saturation. See Table 1. At 15 grams of hemoglobin as is seen in Table 1, this would mean that oxygen carried in 100 cc. of blood with a drop of PO_2 from 100-70 mmHg. would be a difference of 1.2 cc. or from 19.7 cc. to 18.5 cc. The only change that can be made, if the oxygen saturation is low, is therefore, to increase the inspired oxygen level in inspired air.

First to be discussed will be restrictive disease. In restrictive disease there may be no change in blood gases, particularly at rest.

O_2 pressure	% Sat.	15 gmsHgb	10 gmsHgb	5 gmsHgb
100 mgmHgb	97.4	19.7 cc	13.3 cc	6.55 cc
90 mgmHgb	96.5	19.4 cc	12.9 cc	6.41 cc
80 mgmHgb	94.5	18.9 cc	12.6 cc	6.34 cc
70 mgmHgb	92.7	18.5 cc	12.4 cc	6.2 cc

TABLE No. 1—Oxygen partial pressure and % saturation at different partial pressures in relation to various hemoglobin concentrations.

With exercise, restrictive disease impairs the ability of the patient to ventilate CO_2 and thus oxygen decreases. The first change noted is that, with exercise, pH goes down, CO_2 goes up, and PO_2 begins to drop, and these occur much sooner than would be expected for the normal individual. As disease gets worse, alveolar hypoventilation may ensue at rest due to the limited exchange that is available and CO_2 becomes slightly elevated with reduced PO_2 at rest. If this occurs slowly and the kidney is able to compensate then the pH will remain normal and the chloride will drop slightly to compensate for the elevation in CO_2. In this individual, as exercise is attempted fatigue occurs very rapidly with markedly lowered pH, elevated CO_2, and markedly low drops in oxygen saturation.

In obstructive disease situations are somewhat different. The problem here is one of interference with air flow along the bronchial tubes which go to some alveoli. The primary determinant of gas concentration in this situation is the volume of perfusion of alveoli being poorly ventilated due to the obstructive process as opposed to those being well ventilated.

The first thing noted here is over ventilation of the normally ventilated alveoli with blood leaving these alveoli with normal oxygen saturations and low carbon dioxide saturations. The obstructed alveoli, however, will show hypoventilation where CO_2

may be slightly elevated on leaving the alveoli and oxygen saturation will be low so that blood leaving both alveolar groups, as they mix in the pulmonary vein, may be low normal or low in oxygen saturation, but generally normal in carbon dioxide levels.

In the patient who has minimal disease and normal oxygen and CO_2 levels, as exercise is attempted the obstructed alveoli usually are better ventilated and PO_2 remains normal, pH goes down, and PCO_2 goes up slightly as would be expected with exercise. As disease increases the CO_2 usually does not get too elevated but oxygen saturation begins to fall and then, as exercise continues, in very short order it causes extreme difficulties with marked lowering of oxygen saturation, marked increase in carbon dioxide levels, and marked reduction in pH. These continue until the disease gets very severe where exercise is impossible. Due to this set of circumstances, arterial oxygen saturation rapidly becomes smaller whereas arterial carbon dioxide elevation usually is mild. This individual is cyanotic and for this reason the patient with obstructive disease has come to be known as the "Blue Bloater."

Next to be considered is trapping. Trapping usually occurs with obstructive disease or loss of elasticity in which, due to the obstruction in air flow, air is trapped in the alveolar area. With trapping, if increased pressures are applied then there is bronchiolar collapse beyond the obstruction. In the case of elasticity with kinking and coiling there may also be bronchiolar collapse rather than retraction with trapping. As an individual with obstructive disease and a tendency to trap exercises he begins to use his chest cage forceably for both inspiration and expiration greater pressures are built up. With exercise bronchiolar collapse is quite regularly seen. When air is trapped in the alveolar area there is poor ventilation during the inspiratory phase since the alveolus is partially or almost completely full. There is a slow reduction of arterial oxygen saturation without a significant elevation in carbon dioxide content.

As was discussed previously, as oxygen concentration falls the oxygen volume falls, thus giving a disproportionate increase in the relative volume of CO_2 which will then equalize with the blood and thus carbon dioxide is also removed from the alveolus. As volume reduces with inspiration, there may be a resurge into the area of fresh air followed by a greater degree of trapping which slowly reduces in volume as previously described. If the trapping becomes completely obstructive the air is absorbed and collapse will occur in the alveolus. Therefore, in this area there is a fluctuation of gas concentrations. If this is a generalized process throughout the lung there will be a generalized drop in arterial oxygen saturations and as a result a slow rise in carbon dioxide. As exercise is done and interstitial pressures greatly increase, bronchiolar collapse occurs regularly, interpulmonary mixing of gases gets much worse. There is extreme oxygen utilization and CO_2 production with the pulmonary artery blood going to the capillary bed which is lower in oxygen and much higher in CO_2. Due to the increase in positive pressure during expiration circulation past the alveoli is reduced. As a result the oxygen extraction is reduced but there is an increase in PCO_2 in the alveolus. Thus oxygen pressure goes down. This produces an acute respiratory acidosis and therefore with exercise there is seen a very low pH, a high PCO_2, and a low PO_2. These changes occur rapidly and the patient is usually unable to do much exercise. The degree of desaturation resulting from the low oxygen tensions and elevation of CO_2 acts like an A-V shunt in the pulmonary vessels.

Where there is loss of elasticity as seen in emphysema with the need for increased negative pressure on inspiration and increased positive pressure on expiration, there is the likelihood of trapping due to bronchiolar collapse. As emphysema develops, these large air sacs have lost most of their capillary volume and the ventilatory volume in these areas in relation to the blood perfusion is quite great. Due to the circulatory perfusion

of this type of alveolus there is quite a large quantity of fresh air which as a rule is more than sufficient to maintain normal PCO_2, and a high PO_2, so that in this form of disease there is usually little change in pH, PCO_2, and PO_2. Upon exercise the pH will frequently drop precipitously without significant change in the PO_2 and PCO_2. In emphysema exercise is done predominately by means of anerobic metabolism without the use of oxygen and glucose and with the production of lactates and pyruvates. Anerobic metabolism cannot be carried on very long; thus, there is rapid fatigue with precipitous drops in pH but with little change in PO_2 and PCO_2. For this reason the emphysematous patient has come to be known as the "Pink Puffer."

For the first time there is need to evaluate a new entity. This is alveolar capillary diffusion problems. This condition has not been discussed previously in the descriptions of pulmonary functions testing. At the alveolar capillary level diffusion of oxygen from alveolus to blood is hampered markedly by any increase in thickness between the alveolar space and capillary. Since oxygen is quite insoluble in fluids it requires high pressures to cause transfer; thus, if serous effusion, water, hyaline membrane, etc., occur there is an increased thickness and a block to oxygen diffusion to the blood, and arterial oxygen saturation goes down. Carbon dioxide, not being affected by membrane thickness, is not changed by the increased membrane thickness. Thus, in membrane diseases, carbon dioxide exchange is no problem. Therefore, if arterial oxygen saturation is saturated then pH will be normal; PCO_2 will be normal. As membrane disease gets more generalized then the difficulty of oxygenation begins to interfere with tissue metabolism. The individual begins to hyperventilate which makes the pH more alkaline and usually lowers the PCO_2 in an effort to ventilate sufficiently to compensate for the low arterial oxygen levels. As this occurs, circulation increases in an effort to maintain oxygenation to the tissues. As a general rule membrane disease is the only condition that really produces this picture of normal or alkaline pH, low carbon dioxide, and low arterial oxygen saturations (a respiratory alkalosis which may be compensated). As this disease gets severe and/or as exercise is attempted—oxygenation being at its maximum,—anerobic metabolism is resorted to with the production of lactates and pyruvates so pH now becomes acid, CO_2 is still low, and arterial oxygen saturations are still low. As this continues the hyperventilation can give rise to lactic acidosis which is frequently a fatal entity in itself.

With the stiff lung, if it is due to heart failure, there is a degree of diffusion problem and some degree of restriction with a mixture of results. Where there is a surface tension problem only shunting is usually present. When fibrosis is the problem a restrictive type pattern with A-V shunting is seen in blood gas values.

Finally, one must consider a discussion of diffusion difficulties. There are several entities that will produce this picture; poor interpulmonary mixing of inspired gases and interpulmonary A-V shunting difficulties are frequently confused with membrane diffusion difficulties and must be differentiated. All give reduced arterial oxygen levels as has been pointed out earlier. A-V shunting problems usually have a reduced arterial oxygen saturation, normal or reduced pH, and normal or not much increased arterial carbon dioxide concentration. Where there is poor interpulmonary mixing pH is usually on the low side, PCO_2 is usually on the high side with low arterial oxygen levels. In reviewing our function testing thus far, the easiest way to differentiate diffusion difficulties and A-V shunting from poor interpulmonary mixing is by the single breath or seven-minute nitrogen washout and/or by the 90 per cent helium mixing efficiency which evaluate interpulmonary mixing. If the difficulty in interpulmonary mixing is sufficient to account for the reduction in arterial oxygen saturation then this may be the cause of the difficulty rather than mem-

brane disease. Differentiation of diffusion and interpulmonary mixing difficulties from interpulmonary A-V shunting can be done by breathing 100 per cent oxygen in a closed system. This has been discussed previously. This high oxygen concentration will in effect temporarily eliminate diffusion problems and interpulmonary mixing problems so that following a 15 minute period of breathing 100 per cent oxygen the arterial oxygen saturation should be around 500-550 mmHg.; whereas, if there is interpulmonary A-V shunting then the pulmonary arterial oxygen saturation will be below this level in proportion to the degree of shunting present. Thus one may differentiate interpulmonary mixing problems to a certain extent from diffusion and interpulmonary A-V shunting problems. If interpulmonary mixing is normal, a reduced oxygen saturation is either due to interpulmonary A-V shunting or diffusion difficulties. Breathing 100 per cent oxygen will differentiate these two.

The didactic measurements of diffusion are more cumbersome and less accurate than the measurements made previously of other pulmonary functions. As has been pointed out diffusion studies will give low values where there is poor interpulmonary mixing of gases or interpulmonary A-V shunting of blood as well as with membrane diffusion problems. There are several techniques on the market for measuring diffusion which are covered adequately in good text books so that the details of testing will not be discussed. The first method for diffusion studies may be done with oxygen. The techniques for this are cumbersome. The results are quite reproduceable. Since it is important that the blood not be fully saturated at the time it finishes passing through the capillary bed, inspiratory oxygen concentrations of 12-14 per cent are used rather than room air. The advantage of using oxygen is that oxygen is the gas which is interfered with in diffusion problems, CO_2 not being affected. Since it is a natural constituent it can be carried out repeatedly with no waiting with quite reproduceable results. Normal values are around 15 ccs. of oxygen per mmHg. oxygen pressure at rest and may rise as high as 60-70 ccs. mmHg. oxygen pressure with exercise.

The other methods require a foreign gas to evaluate the alveolar capillary membrane. Carbon monoxide is a gas handled the same as oxygen with similar solubility and is handled by hemoglobin the same as oxygen. The diffusion of carbon monoxide across the membrane can be unit for unit related to oxygen diffusion. It has been demonstrated in the past that, where equal parts of oxygen and carbon monoxide are breathed, the hemoglobin will take up 210 times the amount of carbon monoxide it does of oxygen. To state it another way, the affinity of hemoglobin for carbon monoxide is 210 times that for oxygen. Because of this high affinity for carbon monoxide very small volumes can be used in the evaluation of membrane difficulty. The usual concentration of carbon monoxide is .03-.2 per cent carbon monoxide in air. There are several types of carbon monoxide tests being done.

The single breath carbon monoxide diffusion technique requires a second foreign gas that is not taken up by the body, usually helium. First there must be a known inspiratory concentration of helium and carbon monoxide. As the patient breaths in, carbon monoxide is removed, helium is not, and the final concentrations of helium and carbon monoxide in expired air gives an indication of carbon monoxide taken up. To perform a single breath test the function known as residual capacity must be first measured and known. After measuring this, the patient is allowed to take a deep breath of air containing carbon monoxide and helium in known concentrations. The breath is held for approximately ten seconds and then the patient breathes out. After the dead space has been washed out, a forced expiratory collection of alveolar gas is collected and analyzed for carbon monoxide and helium concentrations. From these changes diffusion can be determined. This test is dependent upon patient cooperation. It puts very little carbon

monoxide into the blood stream and therefore can be rerun after very short periods of time. It is the best suited of the carbon monoxide diffusion tests in the study of the individual at rest and with exercise. Normals run 10-40 at age 20, and around 10-28 at age 70. There are tables of normals available for this and all other carbon monoxide diffusion tests.

In performing the steady state carbon monoxide diffusion test the individual is allowed to breath normally a gas of known carbon monoxide concentration, .03-.2 per cent. The volume of air breathed is collected and measured; alveolar sampling is continuously done and analyzed with an infra-red carbon monoxide analyzer. When carbon monoxide removal has reached a steady state the test is terminated. From the total volume breathed, the amount removed into the blood stream being measured one can calculate the membrane diffusion. This is a very reproduceable test from day to day. The carbon monoxide level of the blood is greater following this test. For this reason it cannot be reproduced within short periods of time. Since it takes four hours for the blood to reduce by one half its carbon monoxide level breathing room air and about 45 minutes to half the blood level breathing 100 per cent oxygen. Where repeated tests need to be run it has been shown that using .03 per cent carbon monoxide in the inspired gas and following the test by breathing 100 per cent oxygen for 30-45 minutes will allow the test to be repeated with good reproduceability of results about every hour. This is a cumbersome test and somewhat hard to perform on the exercising patient due to the bulky breathing system that is required. It is the author's opinion that if all the previous studies are run and if interpulmonary mixing and A-V shunting are measured, as has been discussed, there is very little clinical information that can be gained by exercise diffusion studies. An adequate evaluation can be made without doing diffusion studies with foreign gases. Normals for steady state range from about 25 for twenty years old to 10 for seventy years old.

Finally, carbon monoxide fractional uptake can be done at the same time steady state diffusion is carried out. Here the final concentration of carbon monoxide in the collected expired air is compared as a per cent to the beginning concentration. Normals range from 35 per cent in old age to 50 per cent in the young. The advantage of doing a steady state and fractional uptake study is that if a patient is hyperventilating with a steady state his diffusion will be normal but because of hyperventilation his fractional uptake will be low. If on the other hand the patient is hyperventilating then the steady state will be low and the fractional uptake will be normal. Thus, by measuring both, if the steady state and fractional uptake are both abnormal then there is more conclusive evidence of diffusion difficulties.

In the past eight articles pulmonary function has been presented not from the standpoint of specific diseases but from the standpoint of function related states: restriction, obstruction, poor elasticity, increased surface tension, stiffness, diffusion, ventilation, and pulmonary circulatory trouble. If these are understood then one can progress and it is hoped will be stimulated to go on to study some of the good text books on the subject.

A final warning is felt necessary in regards to pulmonary function testing. Unlike the electrocardiogram, when a patient is in acute respiratory difficulty, function testing will tell the abnormality at the moment but will not give the patient's actual function. To determine permanent derangements the patient should be treated for at least eight months or longer and his condition stabilized before complete function tests are done and disability is established. The use of pulmonary function tests in the acutely sick individual is primarily for the purpose of evaluating the condition at the moment and, following a treatment procedure, to evaluate the effectiveness of treatment during the acute episode.

PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ..for every meal and, it's made by Campbell

You Can't Blame a Girl...

(when her husband's at fault)

Flagyl® brand of metronidazole

Cures Trichomoniasis in Both Women and Men

About half of all husbands of infected women harbor *Trichomonas vaginalis.**

Few of these men have symptoms. Even so, all are capable of perpetuating the infection and rendering treatment of a woman alone futile.

Only a systemically active medication like Flagyl is capable of reaching the hidden reservoirs of infection in the genitourinary tracts of both men and women.

Only Flagyl has been able to achieve rates of cure consistently above 90 per cent and often up to 100 per cent in trichomonal infections in both men and women.

Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

Contraindications: Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

Dosage and Administration: *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

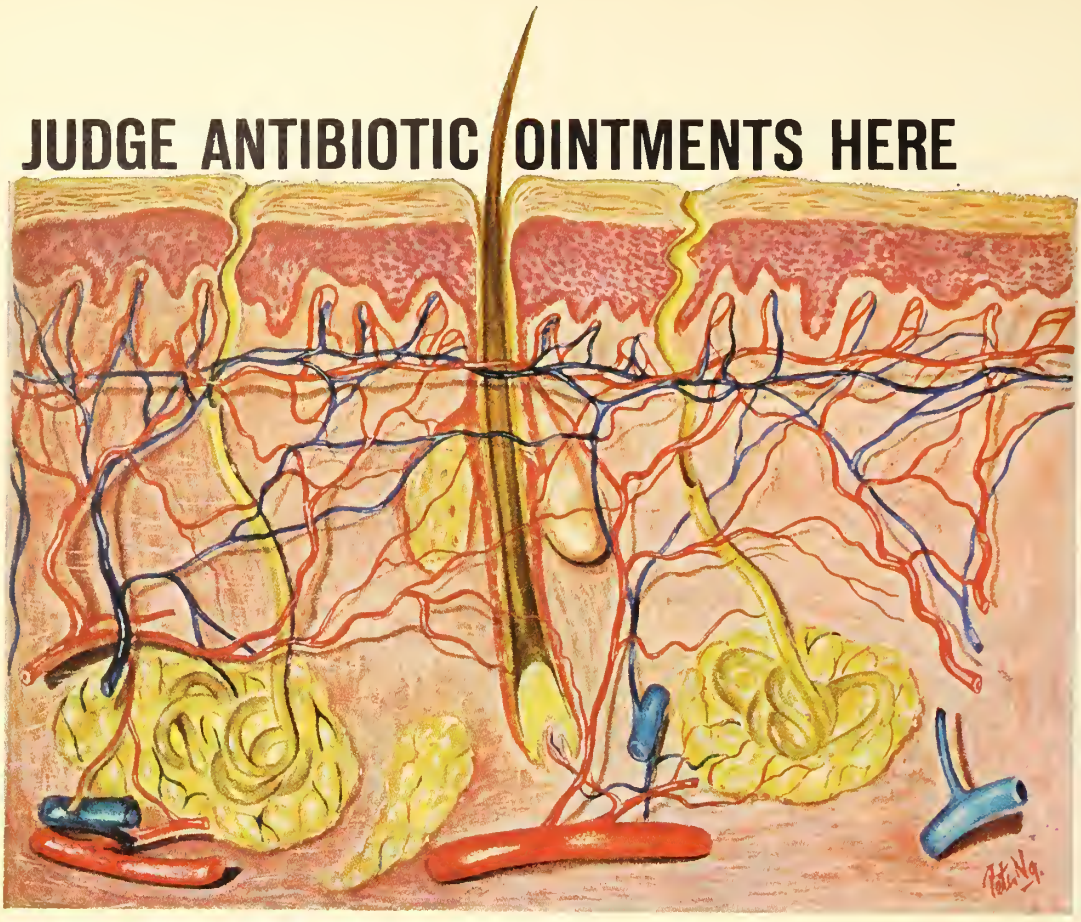
Dosage Forms: Oral tablets . . . 250 mg.
Vaginal inserts . . 500 mg.

*References available on request.

SEARLE P. O. Box 5110 Chicago, Illinois 60680 942

Research in the Service of Medicine

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

The Month in Washington

From the Washington Office
American Medical Association

An American Medical Association proposal for peer review for the medicare and medicaid programs drew favorable reaction from members of the Senate Finance Committee.

Peer review was one part of a three-point program which Dr. Gerald D. Dorman, the outgoing president of the AMA, offered in testimony at a Senate Finance Committee hearing on medicare and medicaid.

Dr. Dorman and Dr. Julius W. Hill, president of the National Medical Association, testified together. They jointly urged on behalf of their organizations that Congress replace medicaid with a national health insurance program subsidized by the federal government.

The AMA health insurance proposal, which initially was approved by the AMA House of Delegates in 1968, was similar to the plan President Nixon included recently in his proposed revised new national welfare program. He said he would send such legislation to Congress early next year.

Congress is not expected to take up this year proposals for national health insurance. But reaction to the peer review proposal was highly encouraging, and prospects for Congressional approval this year appeared good. Sen. Wallace F. Bennett (R., Utah), a finance committee member, directed the committee's staff to work with AMA staff representatives in drafting such legislation as an amendment to a bill revising medicare and medicaid.

The presidents of the AMA, with 223,000 members, and the predominantly negro NMA gave assurances at the finance committee hearing of the medical profession's cooperation in solving the nation's health care problems. It was the first time that spokesmen for the two leading medical associations had testified together before a Congressional committee.

Dr. Dorman said "the medical profession hopes to see the nation pursue" the three-point program in efforts to provide quality health care for everyone as economically as possible.

Dr. Hill said the insurance plan would work better than medicaid in the ghettoes. He also defended physicians against accusations that they have been profiteering under medicaid and medicare.

The first two parts of the AMA program comprised the association's "medicredit" health insurance plan. The third, peer review, "is a way to assure both scientific quality and economic reasonableness in the medical and health care people get," Dr. Dorman said.

"Our first program would meet the problems of the Title XIX medicaid program," Dr. Dorman said. "Under our plan, each low income person or family would receive a certificate for the purchase of a qualified and comprehensive health insurance plan. The protection would be theirs without expense or contribution since the cost of the program would be borne entirely by the federal government.

"The second offers tax credits, on a sliding scale based on the tax liability of a family, for the purchase of qualified health benefits coverage. For those with moderate or higher levels of income, the program would provide cash incentives, through income tax credits, to encourage them to pro-

tect themselves against major health care costs.

"The third part of our program calls for a structured peer review mechanism to insure high quality of care and to prevent abuses of the medicare and medicaid programs."

Dr. Dorman noted that the committee's staff in a report last February on medicare-medicaid suggested that organized medicine regulate itself.

"We agree, and propose a program providing for professional review of matters bearing on reasonableness of charges for, need for, and the quality of services rendered by, the provider of medical or other health services," he said.

In a speech on the Senate floor, Bennett said there is deep concern over the high costs of medicare and medicaid. He complimented the AMA on advancing peer review as a means of curbing these costs. He said:

"I believe the American people are justifiably concerned over the tremendous costs of health care. Much of that concern, it seems to me, is a product of a very real feeling that we are not getting what we are paying for. I believe, equally, that much of the apprehension, anxiety, and suspicion now prevalent—for better or worse—with respect to those responsible for health care would disappear if professional standards review organizations were established and functioned effectively. It seems to me that the American people are entitled to know that American medicine shares their concern—and more importantly—proposes to do something substantial about it through means of professional standards review organizations.

"I believe that physicians, properly organized and with a proper mandate, are capable of conducting an ongoing effective review program which would eliminate much of the present criticism of the profession and help enhance their stature as honorable men in an honorable vocation willing to undertake necessary and broad responsibility for overseeing professional functions. If medicine accepts this role and fulfills its responsibility, then the Government would not need to devote its energies and resources to this area of concern. Make no mistake: the direction of the House-passed social security bill is toward more—not less—review of the need for and quality of health care. I believe my amendment would provide the necessary means by which organized medicine could assume responsibility for that review."

Bennett said that, under his amendment, review groups would have responsibility for reviewing "the totality of care provided patients—including all institutional care." That responsibility he said, would be lodged, "wherever possible and wherever feasible," at the local community level. He said:

"Local emphasis is necessary because the practice of medicine may vary, within reasonable limits, from area to area, and local review assures greater familiarity with the physicians involved and ready access to necessary data. Priority should be given to arrangements with local medical societies—of suitable size—which are willing and capable of undertaking comprehensive professional standards review . . .

"Under the amendment, the Secretary (of Health, Education and Welfare) could use state or local health departments or employ other suitable means of undertaking professional standards review only where the medical societies were unwilling or unable to do the necessary work, or where their efforts were only pro forma or token. Let me emphasize as strongly as possible that the thrust of this proposal is to have physicians, as a group, evaluate physicians and the services they provide and order as individuals."

Bennett said that the review committees should determine that only medically necessary services are provided by physicians, hos-

(Continued on Page 120)

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

(Continued from Page 118)

pitals, nursing homes and pharmacies, and that these services meet proper professional standards.

Disciplinary measures, he said, would be in proportion to the offense and could include: 1) monetary penalties, 2) suspension from federal programs, 3) exclusion from federal programs, 4) civil or criminal prosecution, and 5) steps leading to the suspension or revocation of professional licensure.

Dr. Hill directed his testimony before the finance committee mainly to medical care of the blacks and other poor people, particularly in ghettoes. He took issue with the committee staff report which, he said, "by implication attacked the very physicians working closest to the poor and treating them." He said restrictions upon physicians' fees, as advocated in the report, would make more acute the already critical shortage of physicians in ghettoes.

"To those who read the entire report, there were a number of very complimentary things said about all physicians," Dr. Hill said. "But the primary message, the one seized upon by the press and broadcast across the country, appeared to be that any doctor earning a substantial amount of money from medicare-medicaid was somehow cheating both the government and his patients.

"It was bitterly ironic. To work 60 and more hours a week in the ghetto, and to be fairly paid, was suddenly prima facie evidence of wrong-doing.

"The report was also interpreted so that the blame for the rising cost of medicare-medicaid was directed at the physician—and particularly those caring for the poor.

"Therefore, we of the National Medical Association take strong exception. The implications and accusations of that report were grossly unfair. It is difficult enough to get physicians to practice among the poor . . . If these men, professionals committed to providing care, are to be subjected to irresponsible accusations for the size and success of their ghetto practices, it will very soon be impossible to find a doctor among the American poor."

The associations showed the senators a brief movie of physicians practicing in a Chicago ghetto health center and in an Appalachian community clinic.

* * *

The National Communicable Disease Center of the U. S. Public Health Service said that not a single death from polio was reported in the nation last year.

It was the first time no death from the disease was reported since 1955 when regular polio surveillance was started. In addition to the absence of a death, the total number of cases of paralytic polio was only 19.

Before the introduction of polio vaccine during the mid 1950's, annual paralytic cases went as high as 21,300 with 1,400 deaths. The number of cases began to dwindle after use of the vaccine became widespread and 1960, with 230 cases, was the last year when the number of deaths exceeded 100. In recent years, the death toll usually has been between 10 and 20.

Among the 19 paralytic cases last year, only one occurred in a person who had received a full series of anti-polio doses. The exception was a two-year-old suffering from an inborn inability to form protective antibodies against bacteria and viruses.

An estimated 26.5 million doses of vaccine, most of it the oral type, was administered nationwide last year.

A federal health official warned that small outbreaks of polio still are possible in city slums and other areas where it is difficult to achieve 100 per cent immunization. There already have been 11 known cases and one death in the Rio Grande Valley citrus growing region of Texas where there was a problem of convincing parents of the need for immunizing.

Coffee, Tea or Smoke?

"This is, uh, your Captain speaking. We are flying at 35,000 feet, and if you look out the port, er, left side of the aircraft you can, uh, see the Grand Canyon."

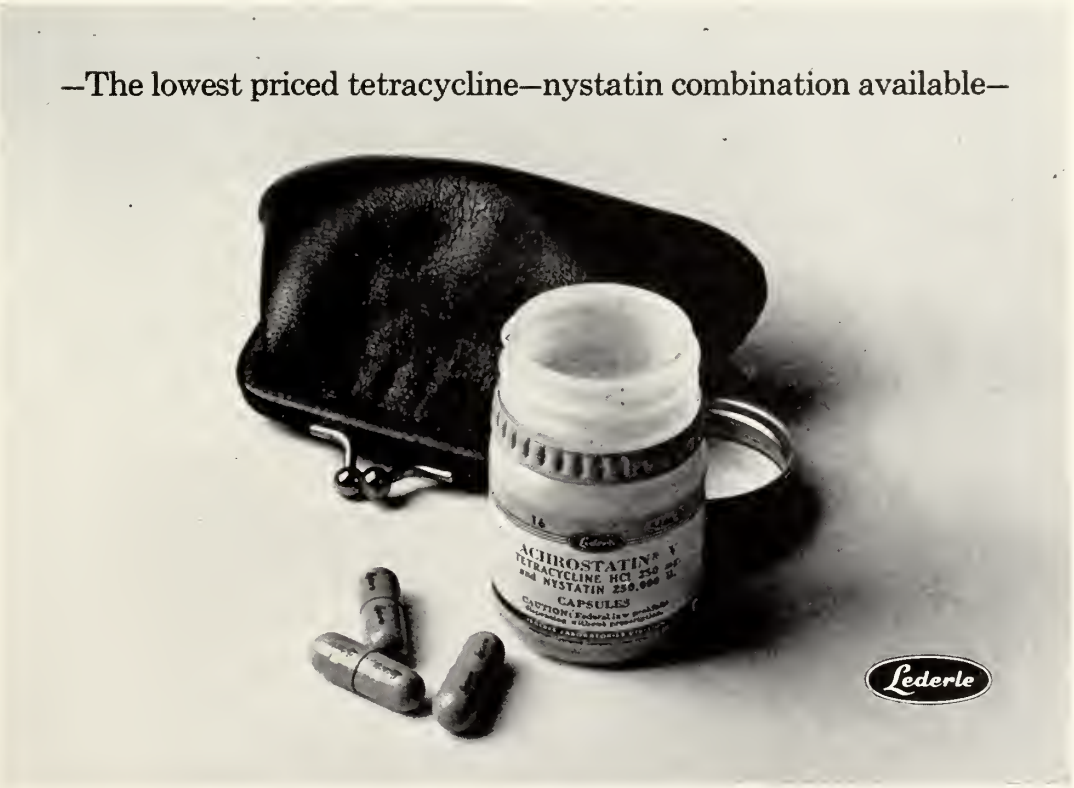
All heads swivel to port and crane for a view. Those nearest the window exclaim and describe the scene, but many of the others are looking in vain through a blue haze of cigarette smoke.

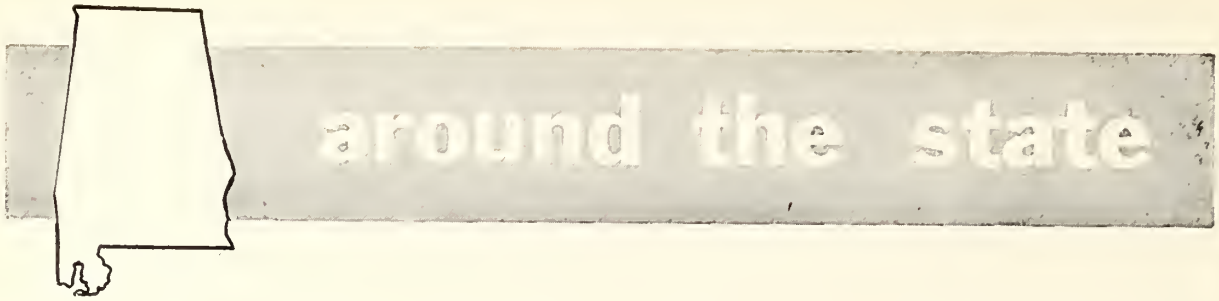
Recent lawsuits have raised the question of a health hazard riding in the closed cabin of a commercial aircraft with cigarette smokers clouding the air. Other groups are petitioning the airlines, and the Federal Aviation Administration to require separate sections in the air craft for smokers and non-smokers.

In the days of deluxe railway travel, smoking was confined to a special smoking car. In a small aircraft such an arrangement was impractical. Today we are on the threshold of new super jets which lend themselves to the concept of a separate section of the plane for those who smoke, and it might be well for state medical societies to go on record as advocating such a policy. This is one more area where physicians can add a constructive voice to a matter of public health. Even if one agrees with Alfred Dunhill who described smoking as, "a gentle art," the hazard to health and comfort of fellow passengers cannot be denied. Besides, the Martini on the plane tastes better when one is not surrounded by a cloud of second-hand smoke.

—Robert F. Lorenzen, M. D.
Editor, Arizona Medicine.

—The lowest priced tetracycline—nystatin combination available—





One Of Ten In 1971's 50-Year Club

The Birmingham psychiatrist-neurologist whose skill with a scalpel made headlines when he successfully removed a bullet from the brain of one of the nine notorious "Scottsboro boys" of a generation ago, is one of ten Alabama doctors qualifying for membership in MASA's 50-Year Club, to be recognized at the 1971 annual meeting.

Dr. Littlejohn

He is Dr. Wilmot (Bill) S. Littlejohn, native Georgian, who received his M. D. degree from Emory in 1921, who between then and moving to Alabama nine years later interned in Atlanta, was in general practice for seven years, went on to a residency at Bellevue Hospital, and served on the staff of the New York Neurological Institute.

Dr. Littlejohn's Birmingham practice was interrupted by war and he served (1941-45) with the U. S. Naval Reserve Medical Corps. He is married to the former Mary Rose Brown of Americus, Ga., and their daughter, Mary McLester (Littlejohn) Belser is married to an Auburn professor. The Belsers have twin daughters.

A life counsellor of the Medical Association of the State of Alabama, Dr. Littlejohn served 11 years on the Board of Censors, declining to offer for another term, announced in M. D. in the issue dated Feb. 27, 1969. But he continues in active private practice.

Nine other doctors who received their M. D. degrees in 1921, and so qualify for the 50-Year Club, are:

Thomas Jefferson Anderson, Hale County, Tulane; Wyatt Heflin Blake, Jr., Colbert, Sheffield, Vanderbilt; Emmett Treadwell Brunson, Geneva, Samson, Emory; Melson Barfield Carter, Jefferson, Birmingham, Tulane; Robert Bernard Garlington, Tallapoosa, Camp Hill, Emory; Hughes Kennedy, Jr., Jefferson, Birmingham, Harvard; Ralph Lewis Lawrence, Montgomery, S. Carolina; Charles Franklin Lewis, Jefferson, Birmingham, Tulane; James Loveless Seibold, Jefferson, Birmingham, Tulane.

'Bama State Medical School

A prominent Montgomery doctor has suggested to Governor-nominate George C. Wallace that he explore the possibility of establishing a medical school at Alabama State to relieve one part of an obvious physician shortage.

Sitting

We sit at breakfast, we sit on the train on the way to work, we sit at work, we sit at lunch, we sit all afternoon . . . a hodgepodge of sagging livers, sinking gall bladders, drooping stomachs, compressed intestines and squashed pelvic organs.—Dr. John Button, Jr.

Alabamians Visit Beautiful Mediterranean Playground

By WILLIAM J. MAHONEY, JR.

An eight-day week on a Mediterranean island will provide 250 Alabamians with conversational material for a lifetime, if they wish it. With few exceptions, the party was composed of doctors and their families.

From Huntsville, Decatur and Selma to Mobile and Dothan, everyone converged on Birmingham's airport by 8 o'clock Saturday evening, to check in two hours ahead of takeoff time.

Because the Magic City's runways are too short to get a mammoth plane such as the Super-DC8 in the air with a full load of fuel, it was necessary to fly first to Bangor, Maine, to refuel for the Atlantic crossing. The passenger capacity of this ONA monster is 251 plus an 11-member crew, and its cruising speed is just under 600 ground miles an hour.

From the takeoff in Birmingham (a city that must wait until next year to celebrate its centennial), through Bangor (which is within 20 years of its 200th birthday), to the largest of the Balearic islands in the Mediterranean (with well over 2,000 years of recorded life), the pages of history were turning backwards for the Alabama travelers. The great conqueror Hannibal, who made the Roman Empire tremble in its boots, was supposedly born in the Balearics.

But steeped in history as such a trip must be, here was no traveling classroom intent on probing the past, but rather a congenial 250 people from the Deep South on a fun trip from the New World to the Old World.

For four of us, it began in Montgomery, as we drove up that Saturday afternoon with Dr. and Mrs. Hamilton H. Hutchinson, their daughter Laura at the wheel. We would be met on the return by our son.

FROM PARKS OF MADRID TO CAVES

It was 2 o'clock Sunday afternoon (Mediterranean time), 8 o'clock Sunday morning (Alabama time), when the big ship made its touchdown on Majorca's runways. And there was just time (for those who wished) to lock their baggage in their hotel rooms and attend a bullfight. Some did.

A week of scheduled interest and fun was spread out before the party of 250, but the choice of any or all of it was up to the individual. Two highlights were air trips out of the Balearics—Wednesday to Madrid, Friday to mystical and ancient Algiers on the North African coast.

These two air trips were sandwiched between tours of Palma (the Majorcan capital where the party stayed), by day and by night; to Manacor and the caves of Drach (due west of Palma), where on an underground lake's shore the party sat in the dark and listened to an exquisite Chopin concert from invisible boats wrapped around with strings of glowing electric lights; to Formentor, on the northeastern tip of the island, for a boat trip across Pollensa Bay and dinner in the luxury hotel; to Valledemosa and a visit to the Carthusian Monastery, where tubercular Chopin and George Sand had their romantic stay in 1838, where there are still many of their effects, including the Chopin piano. Then there were trips to Palma's two most notorious nightclubs, with their spectacular European floorshows. And it was all climaxed by a farewell banquet in the spectacular Pueblo de Espana.

DOCTORS BROUGHT THEIR FAMILIES

Dr. John L. Carmichael, Birmingham surgeon, had with him his daughter, Miss Grace Carmichael. Dr. A. G. Finlay of Guntersville brought along his sister, Mrs. Alice Hughes. The A. J. Huffmans of Fayette had with them their son, A. J. Huffman, Jr. Dr. and Mrs. John Allen Jones of Montgomery were accompanied by their son, Dr. John Allen Jones III, and his wife.

Dr. Max V. McLaughlin of Mobile, was accompanied by his young son Victor. With Dr. and Mrs. Philip B. Moss of Selma were

MADRID AND MAJORCA:—1) Dr. and Mrs. Philip B. Moss, Jr., Selma, with their three daughters—Dexter, Pat and Janet—and his brother Dr. and Mrs. George Moss, Natchez, Miss., and their daughter Helen. . . 2) On boat crossing from Formentor, Dr. and Mrs. Paul Mertins, Jr., Montgomery. . . 3) Alabama Party in vast courtyard of magnificent Palace Real, Madrid. . . 4) Boarding boats for trip from Formentor; identifiable are Dr. and Mrs. Otto Burton, Montgomery. . . 5) Dr. and Mrs. Joe White, Birmingham, and children, Kim and Christopher. . . 6) At sidewalk cafe in Palma. Identifiable are Dr. Max McLaughlin, Mobile, and his personable young son, Victor.

their three daughters, his brother Dr. George Moss of Natchez, Miss., Mrs. Moss and their daughter. Accompanying Dr. and Mrs. Ed Webb were their two daughters and their son, Ed Webb, Jr., all of Montgomery. Dr. and Mrs. C. W. Neville of Birmingham took their young granddaughter Ann with them.

Dr. and Mrs. William Virgin, Montgomery, were accompanied by their daughter Eloise and niece Clement Virgin of Atlanta. With Dr. and Mrs. Paul S. Mertins, Jr., also of Montgomery, were three of their children—Ellen, Marjorie and Scott. Dr. and Mrs. Joe White of Birmingham took with them their daughter Kim and son Christopher.

FROM TREASURE TROVE TO OLIVE GROVE

The view from our fifth-floor balcony in the Melia Mellorca at night is breath-taking. Lights on the water are from ships in the harbor. A freshening breeze blows up the Bay of Palma from the Mediterranean. Inside the bright crescent of lights that follow the bay's contour away to the left, is a well traveled highway.

And in the distance, near the top of a mountain, and shining as though made of highly-polished brass, is 14th Century Bellver Castle, whose history could well challenge that of the Tower of London. Built as a sum-

(Continued on Page 129)

Schering

After only one year:

Administered to more people than live in Montgomery and Gadsden.*

Injectable Garamycin®
brand of
gentamicin sulfate injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Montgomery and Gadsden is 205,000. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Injectable Garamycin®

brand of gentamicin sulfate injection

Schering

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
	Less Severe	Resistant/ Moderately Severe	Serious/Life-Threatening
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	0.8-1.2 mg./kg. for 7-10 days	Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	up to 5 mg./kg.
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa,* and species of indole-positive and indole-negative *Proteus, Escherichia coli,* and *Klebsiella-Aerobacter.* Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(44%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa,* 828 (93%); *Escherichia coli,* 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa, Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

Adverse Reactions: The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.

AHFS CATEGORY 8:12.28 S-02

With Blue Shield's new plan to pay physicians' usual, reasonable and customary fees, your patients are far less likely to favor methods of government-controlled health care.

BLUE CROSS-BLUE SHIELD OF ALABAMA

®

MASA Families Visit The Mediterranean
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

(Continued from Page 124)

mer palace by the kings of Majorca, it was destined to serve in turn as a fortress, as a royal prison, as a prison for common criminals, as a site for assassinations, murders and executions, and today, the property of the City of Palma, a glittering gem perched above the Bay of Palma like a yellow diamond in a Tiffany setting.

The range of things to see in Majorca is as broad and as long as the island itself—from towering cliffs that rise hundreds of feet from the sea to sprawling beaches with impressive hotels, from the 10- and 12-story hostelries and apartments that belt the Bay of Palma to the courtyards and stately mansions reaching back to the 15th century, from the windmills (that are really wind pumps, sucking up water to irrigate modern farms) that will recall Holland for some, to the groves of thousand-year-old olive trees that still produce olives on slender green branches growing out of gnarled and twisted trunks.

And the range in transportation is just as wide, from the palatial private yachts, freighters and the fishing fleet, carefully segregated in the crescented harbor, to the buses, taxis, horse-drawn carriages and the heavily loaded donkeys on the streets and highways, and on to the airport where planes are arriving and departing continually, linking Europe and all the civilized world beyond.

This airport is where we arrived on a direct flight from Bangor, Maine. It is from where our party enplaned, first to Madrid on Wednesday, then in the opposite direction on Friday, to Algiers. It is from where our Super DC8 jet sped down the runways, taking the air to end a week in the Mediterranean, heading across Spain, a corner of Portugal, and to chase the sun across the Atlantic —across Newfoundland and Nova Scotia— to Bangor and American customs, to refuel and turn south to Birmingham.

It's a good camera, the Zeiss Ikon that went along on the Doctors' trip to Majorca. When it's properly set, aimed and triggered, it produces a good likeness. Among those whose likenesses failed to show on 35 mm film were:

Dr. and Mrs. Ralph M. Clements, Tuscaloosa; Dr. and Mrs. H. F. Heslington, Florence; Mrs. Harriet Welch, Montgomery; Dr. and Mrs. Gilder L. Wideman, Birmingham; Dr. and Mrs. James E. Poteet, Dr. and Mrs. William H. Chambless, Mrs. James G. McLean, all of Montgomery; potential fathers-and-sons-in-medicine candidates, Drs. John Allen Jones II and III; Dr. Jim French, Montgomery; the two lovely daughters of the Edwin Webbs, Montgomery; and such family groups as the Neal Flowers, Mobile; the Durwood Hodges, Scottsboro; and the Paul Mertins, Jr., Montgomery.

MAJORCA AND MADRID:—1) Dr. John L. Carmichael and daughter Grace, Dr. and Mrs. Charles W. Neville and granddaughter, Ann, all of Birmingham. . . 2) Dr. and Mrs. Edwin L. Webb and son, Montgomery. . . 3) From 5th floor balcony, Melia Mellorca. . . 4) Dr. S. J. Selikoff, Montgomery. . . 5) Dr. and Mrs. Henry G. Herrod, Tuscaloosa. . . 6) Dr. and Mrs. Clarence V. Partridge, Mobile. . . 7) Dr. and Mrs. Hamilton H. Hutchinson with daughter Laura (who drove us to Birmingham). . . 8) Dr. and Mrs. William B. Virgin, Montgomery, with daughter Betsy and niece Clement Virgin, Atlanta. . . 9) Boats waiting to cross bay from Hotel Formentor. . . 10) Dr. and Mrs. Robert W. Robinson, Montgomery, on bus at Manacor. . . 11) Juan Mulet, 19, one of popular AITS couriers. . . 12) Dr. and Mrs. Jackson B. Dismukes, Montgomery; Dr. Dismukes is Health Officer of Autauga, Lowndes and other surrounding counties. . . 13) Mrs. Kermit Pitt, Decatur, and Mrs. Joseph Humphries, Birmingham. . . 14) Dr. A. G. Finlay, Guntersville, and sister, Mrs. Alice Hughes. . . 15) Dr. and Mrs. Jacob Neighbors, Mrs. Nell Branson, Mr. John Blatcher, Miss Mary Grace Poole (in that order), all Birmingham. . . 16) Dr. and Mrs. Harold L. Flatt, Birmingham. . . 17) Dr. and Mrs. Howard Striplin, Huntsville. . . 18) Dr. and Mrs. John M. Pickering, Montgomery. . . 19) Dr. and Mrs. John C. Wicks, Jr., Huntsville; Dr. and Mrs. Jimmy Johnson, Decatur. . . 20) Dr. and Mrs. Wilson H. Turner, Dothan; Mr. and Mrs. Ned Dowling, Pinckard . . . 21) Dr. and Mrs. Arthur A. Calix, Decatur. . . 22) Dr. and Mrs. James M. Parks, Montgomery. . . 23) Dr. and Mrs. Richard E. Tyler, Birmingham at olive-wood shop, Inca, Majorca. . . 24) Dr. and Mrs. Joseph S. Legg, Pritchard.

Fathers and Sons in Medicine

The Doctors R. K. Wilson of Alabama And Florida

Medicine has changed in the last 40 years, and a classic illustration of that change may be found in the subjects of this father-and-son entry: Robert Kemp Wilson, Sr. and Jr., M. Ds.

Born in Pidcock, Georgia, on Saturday, September 13—a birthdate he shares with Walter Reed, doctor and bacteriologist who led man in the conquest of yellow fever, and Gen. John J. Pershing, who led the AEF to victory in World War I—the senior Wilson obtained both his baccalaureate and his M. D. degrees from the University of Georgia. His internships and residencies spanned 4½ years in Rhode Island Hospital and Charles V. Chapin Hospital in Providence, Rhode Island, and in Truesdale Hospital, Fall River, Massachusetts.

It was before he went to the latter hospital that he met a student senior nurse, Louise Margaret Nelson. At the time of their meeting he was Second Deputy of Health for the City of Providence. They were married four years after this first meeting.

The Georgia sheepskin (proclaiming to the world that Robert Kemp Wilson was a graduate in Medicine) was nine years old when he and his New England wife returned South in time for the arrival in Dothan, Ala., of their son on Sunday, June 13, 1937—a June birthday he shares, incidentally, with the American soldier, Winfield Scott, and the Irish poet, William Butler Yeats.

When Robert K. Wilson, the second of that name, was a sophomore at the University of Alabama he met, wooed and wed another member of the Sophomore class, Charlie Faye Inmon. And their first son, the third of that name, was a year old when his dad entered Medical School after graduating with

DRS. ROBERT K. WILSON, SR. & JR.

his baccalaureate degree, wearing a Phi Beta Kappa key.

From Medical College in Birmingham, young Dr. Wilson and his wife moved to Chapel Hill, N. C., where he served both his internship and residency in pediatrics in North Carolina Memorial Hospital, before returning to Alabama in 1966. Back home, he was for the next two years Chief of Pediatrics in the hospital at Maxwell Air Force Base, Montgomery. Then, two years ago, out of service, the Wilson family moved to Pensacola, Fla., where he entered private practice, associated with the Department of Pediatrics, Medical Center Clinic. Presently certified to the American Board of Pediatrics, a Fellow of the American Academy of Pediatrics, he is a member of the Escambia County (Fla.) Pediatrics Society, the Escambia County Medical Society, and of the Florida Medical Association. There are now three Wilson sons in this third generation—three excellent prospects for the medical profession—and

the family of five is active in the First Baptist Church of Pensacola.

Meantime, to return to the senior Wilsons, whom we left in Dothan with the birth of their only son in 1937, the eldest of three children, Dr. Wilson was in general practice for two years before entering Public Health Service for five years—first in Huntsville, then as Pickens County Health Officer, and finally with the V. D. control program of the State Health Department. From 1944 to 1948, he was with Dr. T. Brannon Hubbard, Sr., at Hubbard Hospital. (The two Drs. Hubbard, Sr. and Jr., incidentally, were subjects of the Journal's father-and-son feature some months ago).

Twenty-two years ago the Wilsons left Montgomery for Aliceville, where he had served as Pickens County Health Officer, and where he has been in General Practice ever since, except for 13 months spent at the Veterans Hospital, Montgomery. In Aliceville, Mrs. Wilson, a past president of the Womans Auxiliary of the Medical Association of the State of Alabama (WAMASA), is his office nurse.

Dr. Wilson is currently President of the Pickens County Medical Society, chairman of its Board of Censors, a life member of the Southern Medical Association, Secretary of the Staff of the North and South Pickens County Hospitals, as well as Pickens Representative on the West Alabama Comprehensive Health Planning Committee, a Deacon of the First Baptist Church, a past president of the Aliceville Rotary Club, Chairman of the Aliceville Water and Sewer Board, a member of the Aliceville Chamber of Commerce, an Advisory member of the Board of the South Pickens County chapter, American Red Cross, and has served for eight years as City Councilman.

Besides being the parents of a son in medicine, and two daughters, the senior Robert Kemp Wilsons have seven grandsons.

Out Of Kansas Came Senior Of This Doctor Duo

The injunction made popular by Horace Greeley—"Go West, young man"—was reversed by a young Kansan. He came East to learn about medicine in Nashville, and South to Birmingham to practice.

Charles Willis Neville was born in Dalton, Kansas on Sunday, June 9, 1901. From high school he went to Winfield, Kan., to earn his baccalaureate at Southwestern College. In the fall of 1924 he turned Greeley's advice around and entered Vanderbilt for his M. D. degree.

He came out of Birmingham's Hillman Hospital, after a year's internship, to open private practice just as the Magic City's magic became diluted by the Wall Street collapse.

Meantime, Dr. Neville had returned to Kansas for his bride, the former Mae Hatfield of Belle Plains. And two sons were born to them.

DR. CHARLES W. NEVILLE, JR. & SR.

Both followed their father to Vanderbilt, but with different goals ahead. The younger, Gordon Neville, earned a degree in Chemical Engineering. He has gone to Texas where he is presently District Sales Manager for the Jefferson Chemical Company of Chicago. The

Gordon Nevilles are parents of two children, Warren and Allison.

Charles Willis Neville, Jr., who received his M. D. from Vanderbilt 14 years ago to provide the other half of this father-and-son feature, went even farther East to Asheville, North Carolina, where presently he is Medical Director of Highlands Hospital.

But his course was circuitous, going from a year's internship at Vanderbilt University Hospital to a residency in Psychiatry at McLean Hospital, Belmont, Mass., for two years; to another year at Beth-Israel Hospital, Boston; to two years of active Army duty at Fort George Meade, Maryland. Capt. Neville returned to civilian life for further studies and practice at the Downstate Medical Center of the State University of New York.

In 1964, young Dr. Neville went to Duke University, first as Associate and then as Assistant Professor of Psychiatry, subsequently certified by the American Board of Psychiatry and Neurology, and just this year being certified in Administrative Psychiatry and receiving his Doctorate in Medical Sciences.

Married 13 years ago to the former Jean Wheeler, the Junior Nevilles have four children: Ann, 10 (who accompanied her grandparents on their June trip to Majorca, Madrid and Algiers); John, 8; Paul, 4; Susan, 1½.

Meantime, Dr. Charles Willis Neville, Sr., a past President of the Alabama Academy of General Practice, and a past President of the Jefferson County Medical Society, has gone on to take his place in the civic affairs of his adopted town, serving for six years as a member of the Birmingham Board of Education, for two years of that time as the Board's President.

TVMA To Feature Two Alabamians

Birmingham and Montgomery will be represented at the Tennessee Valley Medical Assembly, to be held in the Read House, Chattanooga, Oct. 19-20.

DR. MOODY

Frank G. Moody, M. D., Birmingham surgeon, Professor of Surgery, Director, Gastrointestinal Division, University of Alabama Medical Center, will speak on "Surgical Management of Portal Hypertension," at 11 a. m. Monday, Oct. 19th.

That evening at 7:30, Mr. Shearen Elebash, Montgomery, Yale alumnus and nationally known humorist, will be featured as the banquet speaker.

Other out-of-Tennessee speakers to be featured in the two-day Chattanooga program include: Drs. James R. Jude, Miami; Ronald C. Jones, Dallas; William G. Thurman, Charlottesville, Va.; Kenneth M. Brinkhous, Chapel Hill, N. C.; James L. A. Roth, Philadelphia; Noble O. Fowler, Cincinnati; John T. Sessions, Chapel Hill; Dwight E. Harken, Harvard, Boston; William C. Waters III, Emory, Atlanta.

Occasions do not make a man either strong or weak, but they show what he is.

—Thomas a Kempis.

To my embarrassment I was born in bed with a lady.

—Wilson Mizner.

Diligence is the mother of good luck.

—Franklin.

Hobbies To Fill A Doctor's Leisure

Medicine Ignores Malacology And Misses A Major Hobby

Hobbies to fill a doctor's leisure stumbled over a shell.

Any hobby mentioned in the past in the columns of *M. D.* has brought at least half a dozen responses from enthusiasts. They were hobbies that ranged the field from hunting to boating, from dogs to stamps.

Not so, the shells.

Now, the ancient and honorable interest in shells is as old as man. And the shell types range from the colorful half of a coquina, picked up by the toddler on the beach, to the calcium-thickened clam shell pushed up to the Alabama earth's surface from what was a shallow ocean bed 75 million years ago.

Shells are conspicuous in the illustrated pages of all recorded history, in the burials of the ancients, in the illumination of legend. Imaginative man has used them for everything from money and jewelry to window panes and roadbeds.

Scientific expeditions have been sent in search of them to the Florida keys (notably Sanibel), to the Philippines, to Australia's Great Barrier Reef, to the Indian Ocean and the China Sea, to the swamps of the Everglades and the depths of the Pacific. You'll find such staid establishments as the Smithsonian Institution devoting invaluable time, space and qualified experts to the subject of shells. It maintains a Division of Mollusks and that division's director, R. Tucker Abbott, bylines a massive 600-page, profusely illustrated tome to the subject . . . perhaps one of a hundred volumes published on shells.

But only one doctor of the more than 2,500 members of the Medical Association of the State of Alabama responded to the inquiry seeking physicians whose hobby is shells. And that Dr. James Claude Thompson, a psychiatrist at Bryce Hospital, Tuscaloosa, was reticent in conversation about his hobby.

Dr. Thompson centers his interest in cones, for which he has shelled Sanibel and the other Florida Keys to Key West, and the waters edging Cape Hatteras, North Carolina. He is most modest about this hobby, which has probably occupied more people in more civilizations than any hobby in history. And regrettably he failed to send in a picture to accompany this piece.

Shells are divided into univalves and bivalves—single shells and double shells. And cones are the most important segment of the univalves. One group, found in the South Pacific, is as deadly as a rattler; though most cones are quite harmless to man.

But this opportunity of hobby enthusiasm seems largely ignored by the medical fraternity.

Disappearing Dentures

The problem of lost or mislaid dentures is major in today's nursing homes. Identifying them is often difficult, particularly as lost dentures are frequently claimed by several patients.

Development of an inexpensive kit for permanently imprinting names on individual dentures is announced in a recent issue of Nursing Homes.

Entire Family Shares Doctor's Enthusiasm For Flying

Flying is contagious. And Edward D. Miller, M. D., a past vice president of the Flying Physicians Association, has his father, his wife, and three daughters to prove it.

Two years out of medical school (Indiana University), one year out of residency (Fort Wayne), and only a dozen months in general practice, young Dr. Miller took his first plane-piloting lesson. It was also his first time off the ground in a flying machine. Six and a half hours later (flying time) and he was up in the skies alone, solo.

This was 1956. And the way his aviation innoculation took may be gauged by the fact that two years after that he flew his own plane to Scottsdale, Arizona, to the first meeting of the Flying Physicians Association ever held apart from some other medical group meeting. From there he went on to become Indiana State Chairman of the Flying Physicians for two years (1963-1965), at a time when Indiana boasted the largest and most active chapter in the country. (To the latter statement he adds modestly: "not due to my efforts, but due to those of Dan Urschel who is now deceased).

Meantime, Dr. Miller had married Joyce Hollowell, a childhood sweetheart from his hometown, Danville, Ind. And all three of their daughters had been born when he bought his first airplane on the eve of the FPA meeting in Arizona in 1958. So, he told himself later, he should have known better than to buy a two-seater!

A four-seater was his second plane and in it he sought and earned two ratings necessary for the safety of his family flying with him—his instrument ticket and his commercial license. Then he bought a Bonanza, which proved the ideal ship for the Millers.

For five years, from 1962 to 1967 when he came to Birmingham for a residence in ophthalmology, Dr. Miller's plane became a convenience, a safe and enjoyable means of transportation, and a school room for teaching esthetics and geography, for building

THE FLYING MILLERS

From left: Mrs. Miller, Vicki, Becky, Debbi, Dr. E. D. Miller

character, for rewarding the children for accomplishments.

His father, a real estate broker, was the first to learn to fly. He bought his own plane and built a landing strip on his 40-acre suburban farm. Then came eldest daughter Vicki, who learned to fly before learning to drive an automobile. Had weather permitted, she would have soloed on her 16th birthday. As it was, this peak event in a flying enthusiast's life had to be deferred 24 hours. Vickie is now 19.

Dr. Miller's wife Joyce, their other two daughters, Debbi (now 16) and Becky (now 14), are generally satisfied with a passenger role, along with their dog Skippy (age unstated).

After three years in Alabama (Vicki spent them at Stephens College, Columbia, Mo.), the Millers returned to Indiana last month, about the time of his 43rd birthday (he was born July 9, 1927), and by this time he has probably bought another plane to replace the one sold when they came South.

And maybe one time soon, if the treatment of Indiana eyes and the condition of

(Continued on Page 137)

ell, Dr. Cunningham! I was just telling Herbert hould talk to you about my allergy. rst my nose starts to tickle and..."

know the rest of the story. Sneezing. Watery eyes. nose. And for prompt relief of these symptoms, 's Novahistine® LP. These continuous-release tablets a vasoconstrictor-antihistamine formulation that ns working in minutes, then continues to provide for hours. Even when nasal congestion is due to ated allergic episodes, two Novahistine LP tablets, morning and evening, let most patients breathe freely all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine® LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW **THE DOW CHEMICAL COMPANY** Rx Pharmaceuticals Indianapolis

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

(Continued from Page 134)

the Miller purse permits, they will be going on another junket such as the 11-day trip of eight years ago when the five of them spent one day at the Mt. Rushmore National Monument, three days at the Seattle World's Fair, three days in Disneyland, a day in Phoenix, a day at the Grand Canyon, a day at an Indian reservation near Santa Fe, and a day with the grandparents in Indiana, with only hours of traveling time in between.

Everyone, including Skippy the dog, is wild about flying.

—W. J. M., Jr.

Perseverance is the most overrated of traits, if it is unaccompanied by talent; beating your head against a wall is more likely to produce a concussion in the head than a hole in the wall.

—Sydney Harris.

Not just a motel it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

DOCTORS
Who Play With Fire
(Their Favorite Recipes)

Fagioli (Italian Beans):

Grate two onions, one green pepper, one carrot into large kettle or casserole. Fry gently in five tablespoons olive oil until light golden brown. Add one can peeled Italian tomatoes and one six-ounce can tomato paste. Put in hambone, ½ cup chopped parsley, 7 or 8 chopped leaves of mint, and leaves of 1 sprig thyme. Season to taste with salt and pepper. Mix thoroughly. Simmer slowly for 1 hour. Add 4 one-pound cans white Cammellini beans, drained (White Rose recommended brand), and simmer 15 minutes more.

In small skillet stir one teaspoon sweet red paprika into 2 tablespoons hot olive oil, using wooden spoon, and stir this into beans. Take off fire and let stand ½ hour. Sprinkle with chopped parsley and serve. 10 to 12 people.

Fagioli is an Italian peasant dish that can be prepared in advance, reheated and served for days afterward. Setting overnight or longer improves flavor. It is a feast served with cold meat and salad.

—R. Marshall Pitts, M. D.
Birmingham

She Won!

At the turn of the century the family doctor seriously inspected the tongue and examined the urine for sugar and albumin. The physician had just begun to study the blood as to appearance or chemistry. The common sore throat was painted with iodine. Arnica was an eclectic remedy; the eclectics believed there was an herb for every disease, and the eclectics were strong in Indianapolis. Once I cut my finger, and my mother chased me a mile and a half, trying to put on some arnica, which I hated because it burned. She succeeded.

—Morris Fishbein, M. D.,
An Autobiography, 1969.

Alabama Department of Public Health

Hospital "Disposables" Also A Fire Hazard

The "disposables"—bedding, gowns, dishes and other items of paper and plastics—so popular in hospitals and nursing homes today are not an unmixed blessing, according to Dr. William H. L. Dornette of the Cincinnati (Ohio) Veterans Administration Hospital.

While they lessen the dangers of cross-infection and save on labor costs, they are increasingly a trash problem and a fire hazard.

Dr. Dornette spoke at the 74th Annual Meeting of the National Fire Protection Association (NFPA), in Toronto where some 3,000 fire safety experts from Canada, the United States and foreign countries were in attendance.

With the present concern over air pollution, the big question is how to dispose of the disposables without incineration, Dr. Dornette pointed out.

They constitute a fire hazard both before and after use because of their combustible nature. "While they may be slow-burning, they still burn and will produce large quantities of toxic combustion products when burning under conditions of inadequate air supply."

The fire problems associated with combustible disposables are particularly acute in nursing homes, Dr. Dornette said, where most of the patients are bedridden or incapable of acting on their own, and staffs are not large enough to give help to those who need it in an emergency.

Patients in hospitals and nursing homes need the protection assured by adoption by provinces and states of the up-to-date requirements of NFPA codes and standards, particularly the NFPA Life Safety Code, Dr. Dornette urged. Only 28 provinces and states have adopted the latter in its entirety, a number of them have laws and regulations which may or may not be based on the Life Safety Code, and three have no law whatsoever.

He cited a recent nursing home fire in Marietta, Ohio, in which 28 died as an example of what may happen when regulatory codes are deficient. "The special committee appointed by the governor to study improvements in laws controlling safety in nursing and rest homes made a total of 39 recommendations, ranging from design and sprinkler protection to smoking prohibitions and periodic fire drills.

"It is interesting to note," Dr. Dornette declared, that "the Ohio Hospital Association endorsed enthusiastically all 39 recommendations, but nursing home interests objected strenuously to some, on economic grounds."

Fashions Are Ephemeral

The beard once marked the man of substance, meditation and mature skills. Now it means—whatever anybody wishes it to mean. If the bearded doctor alienates the clean-shaven patient, would not the clean-shaven doctor alienate a bearded patient? And don't doctors have more important matters that should concern them?

BUREAU OF VITAL STATISTICS

PROVISIONAL BIRTH AND DEATH STATISTICS AND COMPARATIVE DATA

Ralph W. Roberts, M. S., Director

March 1970

Live Births Deaths Causes of Death	Number Recorded During March 1970			Rates* (Annual Basis)		
	Total	White	Non-White	1970	1969	1968
Live Births	5,346	3,684	1,662	17.1	16.6	15.9
Deaths	3,086	2,114	972	9.9	9.5	9.4
Fetal Deaths	81	51	30	15.2	16.0	24.3
Infant Deaths—						
under one month	110	66	44	20.6	13.8	19.8
under one year	157	90	67	29.4	25.2	31.7
Maternal Deaths	4	1	3	7.5	1.9	6.0
Causes of Death						
Bacillary dysentery, amebiasis, 004, 006						
Enteritis, other diarrheal diseases, 008, 009	5	3	2	1.6	3.6	†
Tuberculosis, all forms, 010, 019	15	5	10	4.8	8.1	8.5
Diphtheria, 032						
Whooping Cough, 033						
Meningococcal infections, 036	1	1		0.3	1.0	1.0
Poliomyelitis (acute), 040-043**						
Measles, 055						
Syphilis, 090-097	2	1	1	0.6		1.3
Malignant Neoplasms, 140-209	430	321	109	137.3	124.3	126.4
Diabetes Mellitus, 250	66	45	21	21.1	17.4	17.0
Major cardiovascular diseases, 390-448	1,520	1,055	465	485.4	471.2	†
Diseases of heart, 390-398, 402, 404, 410-429	998	716	282	318.7	310.4	314.5
Rheumatic fever & heart, 390-398	13	10	3	4.2	2.9	†
Hypertensive heart & renal diseases, 402, 404	34	17	17	10.9	9.7	†
Ischemic heart disease, 410-414	832	612	220	265.7	270.0	†
Cerebrovascular disease, 430-438	421	271	150	134.4	126.6	137.6
Diseases of the arteries, 440-448	81	57	24	25.9	28.1	21.9
Influenza, 470-474	33	26	7	10.5	4.8	3.6
Pneumonia, 480-486	108	71	37	34.5	30.7	26.5
Bronchitis, emphysema, asthma, 490-493	52	44	8	16.6	12.6	†
Appendicitis, 540-543	7	2	5	2.2	0.6	1.0
Hernia, intestinal obstr., 550-553, 560	6	3	3	1.9	2.3	4.6
Cirrhosis of liver, 571	24	20	4	7.7	4.8	10.5
Complications of preg., childbirth, 630-678	4	1	3	7.5	1.9	6.0
Congenital anomalies, 740-759	39	29	10	7.3	5.4	5.6
Immaturity, 777	25	13	12	4.7	3.7	6.2
Accidents, total, 800-949	221	155	66	70.6	67.8	65.2
Motor vehicle accidents, 810-823, 940	113	90	23	36.1	34.9	31.1
All other defined causes	364	239	125	116.2	118.9	†
Symptoms & ill-defined, 780-796	164	80	84	52.4	63.3	56.3

Taste!

Dicarbosil®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Overworked

The doctor, driving up to a homestead to deliver the family's 11th child, said to the father when he opened the door, "I almost ran over a duck out there—is it yours?" "That's no duck," sighed the man. "It's the stork with its legs worn down."

—Harold Helfer

*Rates: Births and deaths—per 1,000 population
Infant deaths—per 1,000 live births
Fetal deaths—per 1,000 live births for 1970; per 1,000 deliveries for 1969 & 1968.
Maternal deaths—per 10,000 live births for 1970; per 10,000 deliveries for 1969 & 1968.
Deaths from specified causes—per 100,000 population

**Does not include late effects for 1970 and 1969; does include late effects for years prior to 1969.

†NOTE: This category affected by the Code Revision is excluded in above listing. The Eighth Revision of ICD (New Revised Code) is used beginning with January 1969. Comparison with statistics compiled under the former Code (Seventh Revision ICD) and rates cannot be made. Direct to the Alabama Bureau of Vital Statistics any question about comparability of statistics.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 33, Medical College of Georgia 1968, seeking parttime employment on weekends and holidays relieving a general practitioner or emergency room duties in south Alabama within reasonable commuting distance of Pensacola, Fla. LW-1

Age 38; University of Oklahoma, 1955; seeking associate, institutional or industrial practice; in town of 10,000 plus population; interest in surgery. LW-5

Age 28; University of Tennessee, 1965. LW-7

Age 27, Medical College of South Carolina, 1966; seeking location in Gadsden area or in southern part of state in town of 5-7,000 population; available July 1, 1971. LW-7/1

Age 60, University of Arkansas 1932, seeking location for general or industrial practice. LW-7/3

Age 34; University of Tennessee 1964; seeking associate practice. LW-7/5

Age 29; University of Missouri 1967; National Board, seeking associate or solo practice in city of 50,000 or less population in south Alabama. Available July 1970. LW-7/6

Internal Medicine—

Age 59, Cornell University 1933, American Board certified, seeking group practice. LW-8

Age 31, Medical College of South Carolina 1964, Available July 1970. LW-9

Age 37, Duke University, 1956; Board certified, seeking group, associate, or institutional practice. LW-13

Age 33; University of Miami 1962; Board eligible; National Board; seeking solo, group practice, hospital practice, or industrial practice. LW-13/1

Age 31; Medical College of Georgia 1963; seeking location for practice of internal medicine-cardiology. Available 1970. LW-13/2

Neurology—

Age 32, Medical College of Georgia, 1964, seeking assistant or associate, or institutional practice. LW-14

Age 31; Harvard 1962; Board eligible; National Board; seeking solo, group or associate practice. LW-15

Age 29, Indiana Univ., 1964; Board eligible; seeking assistant or associate practice in city of over 100,000 population. LW-17/1

Obstetrics-Gynecology—

Age 49, University of Nebraska, 1943; Board certified, seeking group or institutional practice. LW-19

Age 34, Medical College of Virginia, 1961, Board eligible, seeking group or associate practice. LW-20

Age 33; University of Illinois, 1964; seeking associate practice. LW-21

Ophthalmology—

Age 33; St. Louis University, 1962; seeking solo, or associate practice. LW-21/1

Otolaryngology—

Age 32, University of Pennsylvania 1962, seeking associate practice. Available April 1970. LW-21/2

Pathology

Age 32, University of Louisville 1966, seeking associate or institutional practice. Available July 1970. LW-21/4

Age 52; New York State University 1940; American Board certified; National Board; seeking institutional practice. Available immediately. LW-21/5

Age 48; George Washington University 1947; National Board, American Board certified; seeking industrial, institutional, or associate practice in Birmingham, Montgomery or north Alabama. LW-21/6

Age 35; University of Miami 1962; Board eligible; seeking solo or associate practice. Available September 1970. LW-21/6

Radiology

Age 28; Northwestern University 1964; completing radiology residency. Available July 1971. LW-24

Age 43; Louisiana State University 1953; Board certified, seeking associate practice, preferably in southern section of state. Available January 1970. LW-24/1

Surgery—

Age 33; University of Missouri, 1961; seeking group or associate practice. LW-27

Age 38; Emory University, 1956; Board eligible, seeking group, associate, or institutional practice. LW-28

Age 36, Indiana University 1961; Board eligible; seeking practice in city of 100,000 plus population. LW-31/1

Age 37, University of Paris 1961; seeking group or institutional practice in city of 80,000 plus population. LW-31/2

Age 48; Marquette University 1943; Board eligible; seeking institutional practice in east Alabama. LW-31/3

Age 31; St. Louis University 1963, American Board certified; seeking associate practice. LW-31/3

(Continued on Page 143)

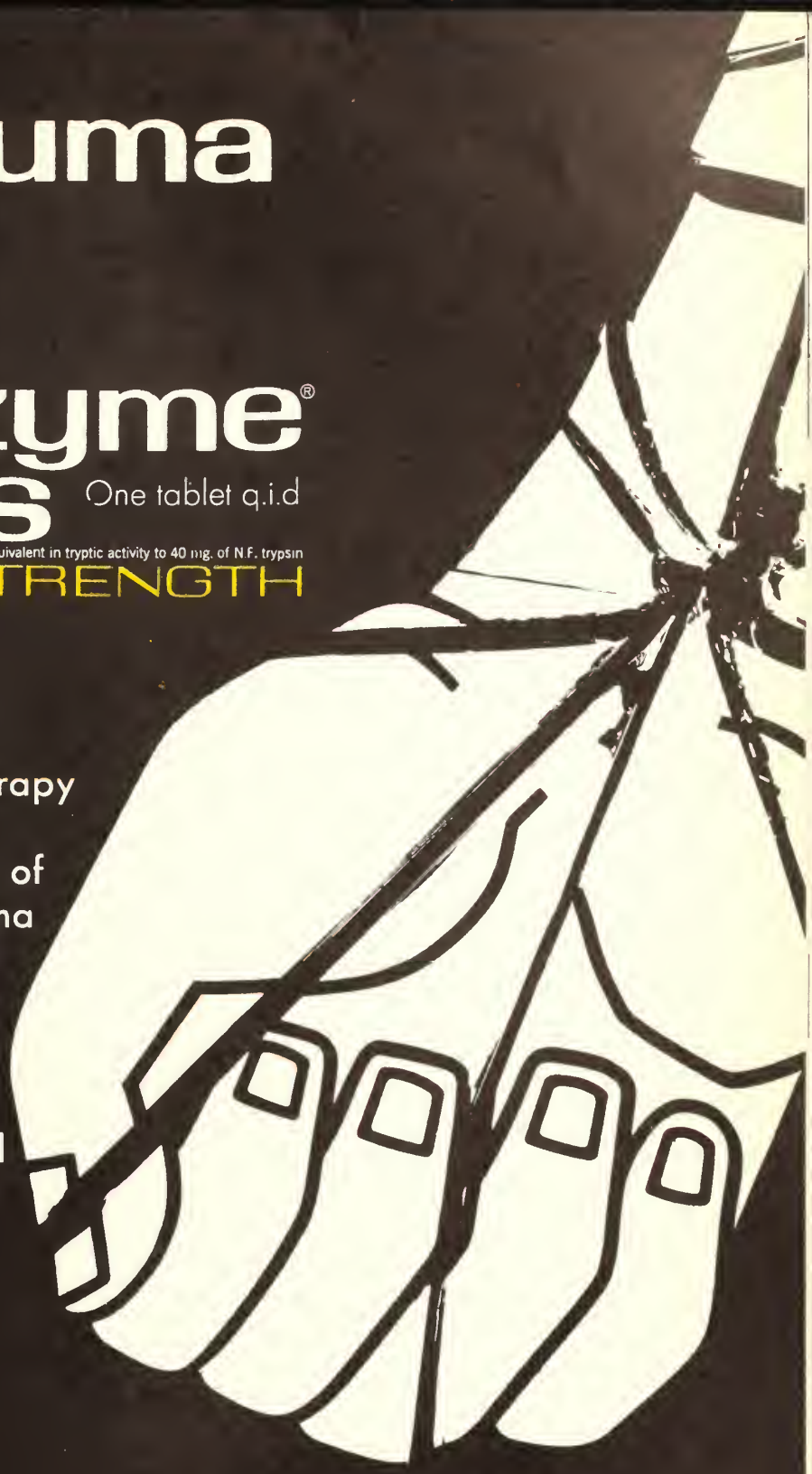
in trauma

new Orenzyme® Bitabs

One tablet q.i.d

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units.; equivalent in tryptic activity to 40 mg. of N.F. trypsin

DOUBLE STRENGTH



Proteolytic enzyme therapy specifically indicated for the rapid resolution of inflammation and edema as adjunctive therapy in accidental and surgical trauma.

1 tablet q.i.d. provides recommended therapeutic dose at lower cost.

A FULL DAY'S DOSAGE

Description: ORENZYME BITABS offers the therapeutic effects of trypsin in an oral form as adjunctive therapy for the rapid resolution of inflammation and edema. ORENZYME BITABS is convenient to use, promotes patient cooperation and is ideally suited for maintenance therapy following parenteral trypsin.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:

- ☐ Accidental Trauma
- ☐ Postoperative Tissue Reactions.

Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.

Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.

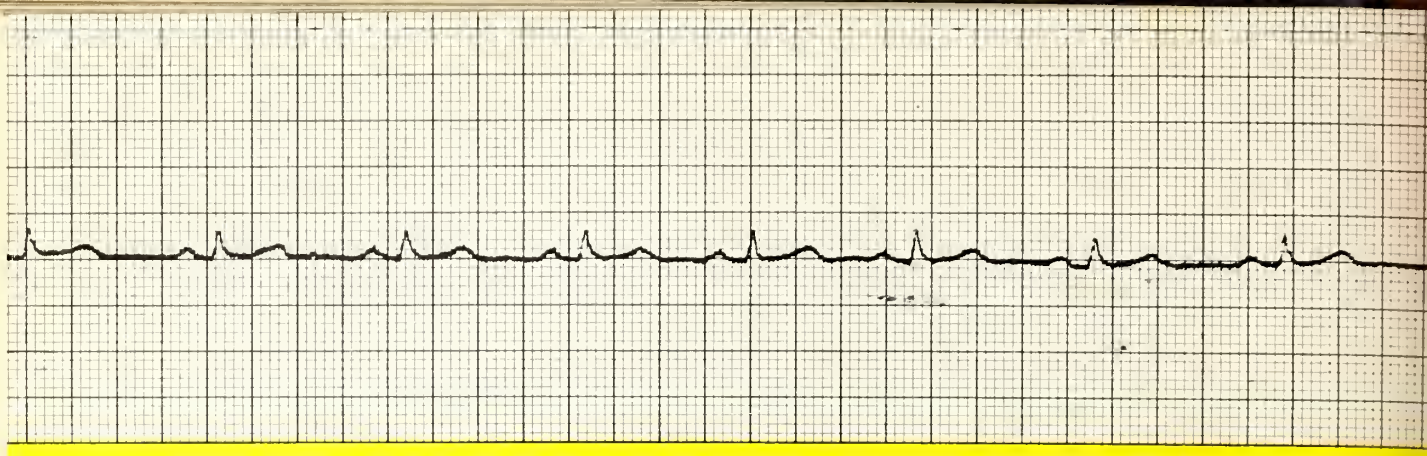
Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.

Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.

Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

TRADEMARK: BITABS U. S. PATENT NO. 3,004,893 4/69 0-821A



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

JOURNAL

of the Medical Association of the State of ALABAMA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
9 OCT 1970

OF THE STATE OF ALABAMA
DISPLAY SHELVES

IN THIS ISSUE

Immunologic Factors in Psychosomatic Disorders 167

The Treatment of Vaginitis with Quinettes - A Clinical Study 172

Physician - Patient Rapport A Vital Relationship 181

Francis A. Countway Lib. of Medicine
10 Shattuck St.
Boston, Massachusetts 02115

SEPTEMBER 1970

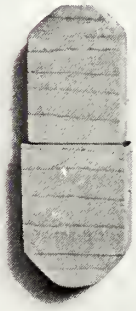
One of seven dosage forms

Thorazine®

brand of chlorpromazine HCl

Spansule®

brand of sustained release capsules



Available in 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg. strengths.

Smith Kline & French Laboratories
Philadelphia, Pa. 19101

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

LIBRARY OF MEDICINE
BOSTON
9 OCT 1970

BSP®

BROMSULPHALEIN® IN A STERILE, DISPOSABLE, ECONOMICAL UNIT

The Bromsulphalein test is a convenient, sensitive, reliable test of liver function.

The precalibrated syringe contained in the BSP Disposable Unit makes weight calculations unnecessary, providing proper dosage regardless of patient-weight. Each unit contains complete directions for use, precautions and contraindications.

The all-inclusive BSP Disposable Unit provides economic unit dispensing.

Complete literature available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D

Baltimore, Maryland 21201

(BSP04)

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • September, 1970 • No. 3

Office of Publication
19 So. Jackson St. — Montgomery, Ala. 36104
Subscription Price — $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. — Montgomery

Managing Editor
L. P. Patterson — Montgomery

Assistant Managing Editor
Mary Nell Williford — Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman — Montgomery
C. Kermit Pitt, M. D. — Decatur
H. H. Hutchinson, M. D. — Montgomery
William L. Smith, M. D. — Montgomery
L. P. Patterson — Montgomery

Officers of the Association

President
S. Buford Word, M. D. — Birmingham

President-Elect
A. E. Thomas, M. D. — Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. — Brewton
J. E. Cameron, M. D. — Alexander City
O. Emfinger, M. D. — Union Springs
Wood S. Herren, M. D. — Birmingham

Secretary-Treasurer
William L. Smith, M. D. — Montgomery

Executive Director
L. P. Patterson — Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. — Decatur
J. P. Collier, M. D. — Tuscaloosa
Paul W. Burleson, M. D. — Birmingham
L. L. Hill, M. D. — Montgomery
M. Vaun Adams, M. D. — Mobile
J. D. Bush, M. D. — Gadsden
E. L. Strandell, M. D. — Brewton
John W. Davis, Jr., M. D. — Montgomery
J. Garber Galbraith, M. D. — Birmingham
H. G. Hodo, M. D. — Fayette

State Health Officer
Ira L. Myers, M. D. — Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1970
Delegate—E. Bryce Robinson, Jr., M. D., — Fairfield
Alternate—W. E. White — Anniston

1971
Delegate—M. Vaun Adams, M. D. — Mobile
Alternate—E. L. McCafferty, Jr., M. D. — Mobile
Delegate—P. W. Burleson, M. D. — Birmingham
Alternate—Robert Parker, M. D. — Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. — Fairfield
Alternate—W. E. White — Anniston

CONTENTS

President's Page — 148

The Woman's Auxiliary — 150

Editorial Comment — 152
- Immigration and the Doctors' Dilemma — 152
- Is Push-Button Medicine Just Over The Horizon? — 153
- Guest Editorial—A Few Thoughts About Internal Medicine — 154

Physician Placement Service In Alabama — 160

Legal Page — 162
- Respondeat Superior — 162

Scientific Section — 167
- Immunologic Factors In Psychosomatic Disorders, Wallace Marshall, M. D., Montgomery — 167
- The Treatment of Vaginitis With Quinettes—A Clinical Study, L. Clark Gravlee, Jr., M. D., Birmingham — 172

Association Forum — 181
- Physician-Patient Rapport A Vital Relationship, Malpractice-Medical Jurisprudence Conference Told — 181

Fathers and Sons in Medicine — 188
- The Harrises—Two Generations of Montgomery Surgeons — 188
- The Doctors Winston Edwards of Alabama — 192

Doctors Who Play With Fire, John G. Cocoris, M. D., Birmingham — 191

Around the State — 197
- Five Alabamians Fill Important Posts in AMA and AMPAC — 197
- New Physicians Licensed to Practice in Alabama — 200
- Vital Statistics — 203

The Month in Washington — 209

Corticosteroid therapy week after week.

then antibiotic therapy last week.

and monilial overgrowth this week.

For many patients on long-term corticosteroid therapy, the addition of oral antibiotic therapy may trigger monilial overgrowth in the intestine. When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

it doesn't let monilia begin where bacteria end.

Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN®, Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 448-9

President's Page

Editor's Note: The President's Page this month is written by President-Elect Archie E. Thomas, M. D., who recently was designated to attend the 1970 Communications Institute sponsored by the American Medical Association. He reports on some of the important conclusions gleaned from that session.

It was an honor and a pleasure to attend the 1970 AMA Communications Institute held August 6th and 7th in Chicago. One is immediately impressed by the high degree of intelligence and dedication demonstrated by the physicians and those members of the AMA staff who work constantly to maintain the high ideals of Medicine.

At this time the AMA faces the greatest crisis in its history. Costs of operations have sky-rocketed due to inflation, and many other factors beyond anyone's control. It is assailed by the reactionaries on the right and the socialists on the left.

Some of its own members—thankfully, they are in a minority—have failed to demonstrate toward their organization the loyalty and constancy which this world's largest medical organization has a right to expect.

For the relatively few dollars which a physician pays for the benefits afforded through AMA membership, when compared to the total of his professional income, this may well be the physician's greatest bargain.

The American medical profession stands at its zenith. Much of the credit for this high status deservedly belongs to those ideals established 123 years ago in Philadelphia when a handful of men gathered to dedicate their lives to the improvement of public service, of medical knowledge, of medical education and of medical ethics.

All of the privileges which you and I, as physicians, enjoy today have come about as a result of high standards for this profession established at that session.

We are better educated by medical colleges adhering to standards established and maintained by the American Medical Association jointly with other organizations.

Throughout our professional lifetimes the latest advancements in medical knowledge and techniques are made available to us. The AMA occupies a role of commanding leadership in making certain that we are kept abreast of the ever-growing, ever-changing body of knowledge encompassed in the practice of medicine.

Because of the accomplishments of the American Medical Association, the physician has won a degree of public trust in Alabama and elsewhere that is shared by no one else.

He enjoys the highest legal recognition and sanction of his practice.

He plays a role in the lives of his patients that no one else—even men of the cloth—are privileged to play.

He is trusted with information, with dreams, with fears that are kept secret from the rest of the world.

And if need be, life itself is placed willingly and trustingly in his hands.

But to enjoy this high status in society and the esteem of mankind, the physician must make significant personal sacrifices.

He surrenders his youth and young manhood to pursue the long and arduous education and training needed to qualify him to practice medicine.

Throughout his life, the demands of his practice force him to give up time for himself and his family which others enjoy.

He barters normal security for the sake of his profession, for it is impossible to practice medicine without taking tremendous risks for which he may well be held accountable under liability laws.

More recently government has intruded into the arena of health care to the extent that

perhaps one-half the population of this country may soon become medical wards of the state.

This has resulted in the placement of new and arbitrary controls upon doctors, other members of the health team and, yes, even upon the patients themselves.

In more recent years physicians have relied upon the American Medical Association to represent it in the highest counsels of government and many of the safeguards that appear as the law of the land today are there because of the successful efforts of the AMA and its spokesmen.

Even the Medicare-Medicaid Law, which was enacted over strong objections of organized medicine, contains safeguards such as "free choice of physician," "usual, reasonable, and customary fees," guaranteed non-interference in the treatment of patients and numerous other concessions to turn Medicine's opposition into one of reluctant acceptance, if not outright approval.

Through the efforts of the American Medical Association countless young men have received scholarships to pursue their medical education.

Through the efforts of the American Medical Association medical schools curricula have been upgraded and now offer the world's most advanced medical education.

Through the efforts of the American Medical Association standards of licensure and reciprocity have been established so that physicians may go from one state to another and practice in a highly skilled and compatible atmosphere.

Through the efforts of the American Medical Association scientific meetings have been held, and are still being held, in an effort to keep physicians abreast of the latest advances in medical knowledge.

Alabama physicians stand high in the Councils of the American Medical Association today.

Dr. John M. Chenault of Decatur is completing his first term as a member of the Board of Trustees, the AMA's highest policy making body. Dr. E. Bryce Robinson of Fairfield has served for a number of years on the Council on Medical Education, and Dr. Paul W. Burleson of Birmingham has recently been elected to the Council on Medical Education. Dr. M. Vaun Adams of Mobile is a member of the Council on National Defense. All of these offices are eagerly sought after and it is to Alabama's credit that its sons should be selected out of 200,000 AMA members to occupy them.

We must stand together now, more firmly united than ever before in our experiences. We must communicate with each other, help each other, protect each other from any force which threaten to destroy our effectiveness as ministers to the sick and afflicted. The bulwark of our strength has ever been, and will continue to be, the American Medical Association. It alone has the resources and the power and the ability to speak for us in the highest councils of this nation. Whatever it cost, the price is infinitesimal compared to the losses which we and all the future generations of doctors will support.

Dr. Carl A. Grote of Huntsville, President of the Alabama Academy of General Practice, recently stated: "Never has there been a time when the Academy could do more for you and never has there been a time when you could do more for the Academy."

I concur wholeheartedly with Dr. Grote's statement. But I wish to expand it to the highest level of medical organization. The American Medical Association needs your support today more than it has ever needed it before. On the other hand, never have you, as a physician stood in greater need of the power and strength embodied through its 200,000 members in the American Medical Association.

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

Summer and vacations have come to a happy ending, and now it is time to plan and put into action the programs of the auxiliary. To co-ordinate our plans for the year, a 1½ day Fall Conference-Workshop will be held in Montgomery on October 7 & 8 at Midtown Holiday Inn.

Good Auxiliary programs are the result of good planning, and good planning is done best through a working, personal partnership between State and County Auxiliaries.

This Conference-Workshop will replace the four District Workshops. It is hoped that by having one large, centrally located meeting with an exciting agenda, more can be accomplished in 1½ days than could be accomplished by travel teams over a period of months. This face-to-face meeting will be the most valuable meeting of the year, and will certainly show its worth in the reports at the convention in Birmingham next April.

Each County Auxiliary is unique, and this diversity is stimulating when we meet to discuss our common interests and different problems. This is the ONLY way the State Auxiliary can be responsive to the needs of the counties.

Mr. A. Brooks Parker, Director, Health Careers of Tennessee, will be the opening keynote speaker. Governor Brewer has accepted to be our honored guest speaker at luncheon on Wednesday, October 7. Mrs. Brewer will also be an honored guest along with many special dignitaries.

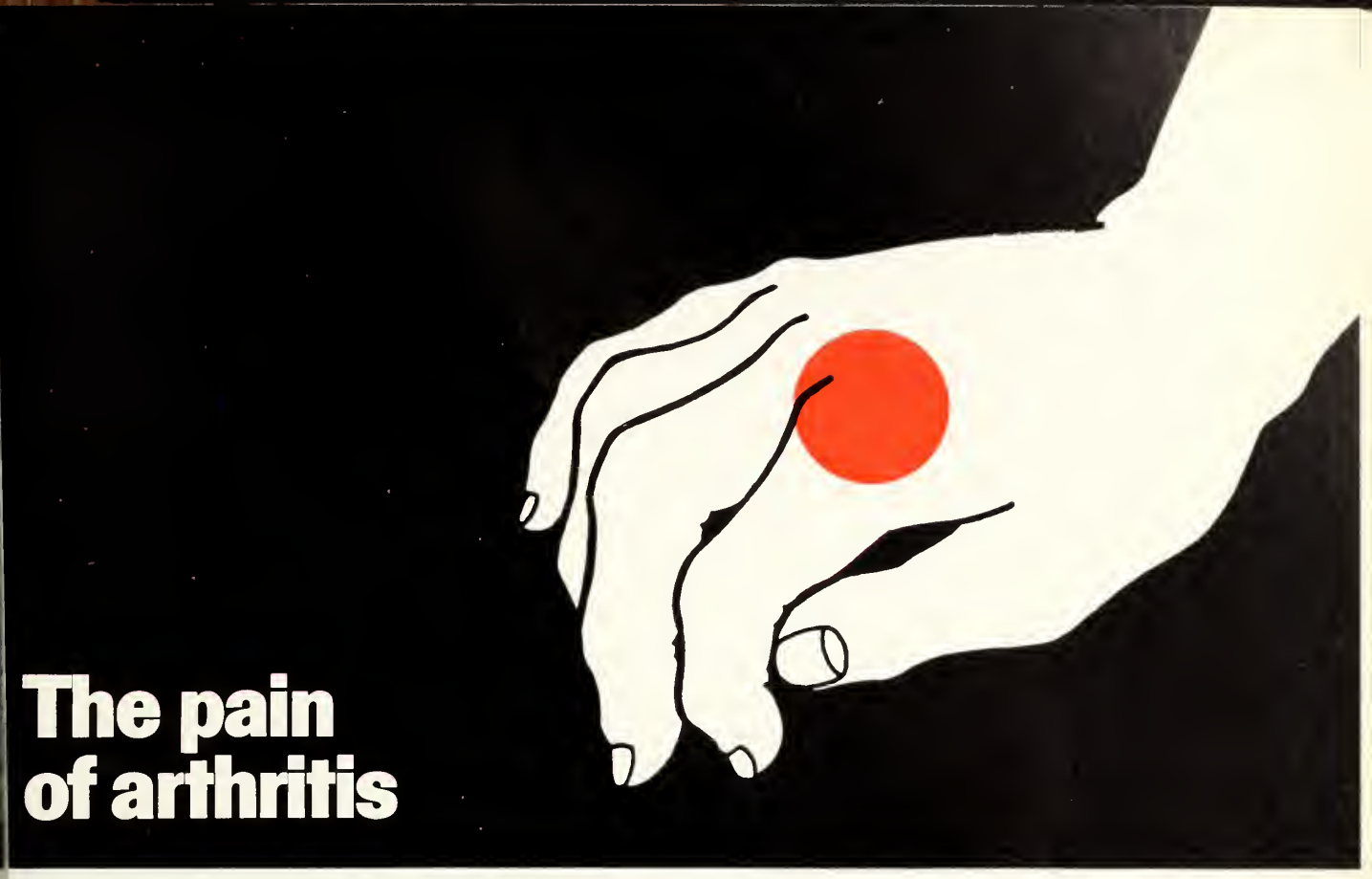
Many months have gone into the planning of this meeting, and I am most grateful to the Montgomery-Autauga Auxiliary for hosting it. However, it will not be effective unless those who are to benefit from the program are there! Each doctor's wife is URGED to attend! I hope the ladies will have a good time working together, and getting to know each other better. There is no substitute for the pleasure of making new friends or the thrill of accomplishment.

Mrs. Howard C. Johnson

We want this year to be an exceptional year of accomplishment. We want to be able to say we work in Auxiliary because there is so much to be done to help our communities, our state, and our nation.

Camille Johnson

Camille Johnson



relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

Immigration and the Doctors' Dilemma

In the beginning, 175 years ago, there were the Alien and Sedition Acts, to keep undesirable foreigners out of the United States and simplify the deportation of undesirables.

But the Acts were short-lived. The Jeffersonians made them a springboard to power and defeat of the Federalists. Thereafter the floodgates were open.

By 1850, according to an article in the February, 1959 issue of *American Heritage*, "only 6.5 per cent of the foreign born attended schools, as compared to 20 per cent of the native born. Among the aliens, one person in every 32 was a pauper receiving public support, while among natives the ratio was only one in every 260. Nearly half of the 27,000 persons convicted of crimes were aliens, although foreigners constituted only 11 per cent of the population."

Concern for the situation created the Know-Nothings, who almost elected a President. But efforts to stem the tide took no legal form until 1882 with a tentative ban to Chinese immigration, made permanent 20 years later by Congress, followed in 1907 by a Japanese bar.

Until the early days of this century all others were welcome "except those who were diseased, insane, or undesirable in some other way."

Then in 1921 an alarmed Government began tightening the taps on European immigration. Quotas were established six years later.

As the depression eased its clutch on the nation's throat, the batteringrams of a more liberal government were turned against the immigration wall until two years ago on July 1st, when it all came tumbling down. Today, again, anybody is welcome except "the mentally retarded, insane, psychopathic, mentally defective, sexual deviates, and those afflicted with any dangerous contagious disease, . . . chronic alcoholics, narcotic addicts, paupers, beggars, stowaways and prostitutes."

Remembering this little piece of statistical history, it's been a hot summer for doctors, co-defendants with the Congress and "Management," charged with responsibility for "the disease, neglect and deprivation" of migrant workers, especially in "Florida, Texas and Michigan." One of the noisier accusers, Senator Walter F. Mondale (D), Minnesota, spent several days in Alabama. This Senator applauded all the accusations and declared that "The capacity of our society to mangle people is virtually limitless."

Wasn't it people of the Mondale philosophy, against any immigration restrictions at all, who brought them here in the first place? Wouldn't it be cheaper to subsidize them in their homes across the seas or across the Rio Grande?

Is Push-Button Medicine Just Over The Horizon?

Man has never solved the theological question of how many gently powerful angels could congregate on the point of a pin.

But he's traveled quite a way in that direction by determining that more than a few devastatingly powerful atoms can be assembled there, waiting to be split.

Along the way man has devised a lot of labor-saving, time-shortening doodads to smooth his way through life.

For instance, there is the push-botton stove that cleans itself, the automatic refrigerator that defrosts itself, the instant coffee that is becoming ever more instant. There is even the pushbutton keyring, with different colored buttons for different kinds of keys, and raised dots on the buttons for the colorblind.

With one finger Man can start an electric can opener or open a warplane's bombays over enemy territory, can turn on a light bulb or trigger a nuclear blast.

And Medicine has been right in there, making with the progress. There is specialization for every facet of practice, each with its own particular instruments and medication, ranging from the thermograph to antibiotics. There are even tranquilizers to make the journey from the sickroom to surgery a pleasant and interesting experience.

Do you suppose there is a doctor still practicing who remembers putting in splints an arm broken cranking a car? Today it's simply a matter of pressing the accelerator all the way to the floor or turning the ignition key all the way to the right. Tomorrow it may require merely harnessing the thought processes. After all, there are wrist watches that keep running as long as the heart keeps beating!

Isn't it entirely possible that a miracle-conditioned world is really demanding today that Medicine keep up or keep ahead of other fields in our push-button world?

How far are we from surgery by robot, diagnosis by computer, and general practice by thought transference?

That will be just one tiny step short of immortality. And no one in all the world would ever again understand the shouted inquiry of the Irish captain, leading his Confederates in the van of Pickett's charge at Gettysburg:

"Come on, you sons of Beelzebub! Do you want to live forever?"

(Continued on Page 154)

TENNESSEE VALLEY MEDICAL ASSEMBLY, READ HOUSE, Chattanooga, Tennessee, October 19-20, 1970. Don J. Russell, M. D., Chairman, 107 Interstate Building, Chattanooga, Tennessee 37402.

Desirable Health Service Opening Auburn University. Salary competitive and negotiable, Fringe benefits. Call collect: W. B. Turk, M. D., 205 826-4416 or write Auburn University, Auburn, Alabama 36830.

GUEST EDITORIAL

A Few Thoughts About Internal Medicine

Some years ago, having abandoned the ancient, honorable and infinitely more eloquent term physician, those who now call themselves internists found themselves beset with an "identity crisis". Few, other than their peers, know what internists were or how they differed from the rest of mankind. Indeed, only within the past few decades has the practicing internist succeeded in educating non-medical types of his uniqueness and precise value. Individual patients, insurance companies, industrial management, labor unions and government have each in turn been persuaded of the internists' specific virtue—and to pay him accordingly.

Perhaps all in vain. For the practicing internist, watching from the sidelines, sees his specialty smack in the middle of convulsive changes in the entire fabric of American medicine. The medical curriculum seems to change somewhat more rapidly than the seasons. Is the nation's greatest need more "primary physicians"? Should the "primary physician" be an internist? Or does the often bewildering proliferation of subspecialists represent the wave of the future? The conflict between the lumpers and the splitters in the acquisition and use of knowledge is of course eternal, perhaps with its own natural ebb and flow. But there are few internists who would not admit that the splitters are now in ascendency. Even so, for some—perhaps for many—could it not still be that the greater part of wisdom lies in the yearning to be the complete physician, the well-rounded internist, the modest Man of All Seasons?

There is a considerable amount of lather around nowadays about various innovative concepts to alter for the better the manner in which internists practice—multiphasic testing-screening centers, physician assistants, computerization of history taking and diagnosis, various types of peer review, to mention a few. It is certainly safe to say that many of these innovations will prove to have merit and will improve our manner of rendering medical care. The socio-economic forms of our work will change to some degree also, it seems certain.

For those internists, however, who now have the care of the sick as both their responsibility and their prime reason for being, a need to hold to the fundamental principles of our past is critical. Availability in time of need, the painstaking time-consuming contemplation of the patient and his problems, the capacity to advise wisely; in short, those medieval cliché-ridden, upstaged principles of internal medicine.

Those principles have, in the past, for many of us, included reverence for medicine as a profession and the willingness and pleasure of being clinical teachers. Of late, the opportunities for the latter activity have been somewhat limited for the "real doctors", but there are some rumors afoot in the land that the cavernous appetite of the people for physicians may even require our modest contribution to satisfy it. We in Alabama have always been fortunate in the cordiality and mutual respect between practicing internists and the Department of Medicine of our medical school. And, as in the past, the present department chairman can certainly be counted as our friend.

In any event, the internist can be certain of one thing. No matter how much the tumult and the shouting, he will always remain at the heart of the matter.

—Alwyn A. Shugerman, M. D.
President, Alabama Society
of Internal Medicine

Remember how great milk of magnesia tasted?

Almost as good as castor oil.
But now you can spare the taste buds and spoil the patient with a modern Dulcolax tablet or suppository.

And Dulcolax works so predictably that the time of bowel movement can often be predicted. Tablets taken at night usually produce a bowel movement the following morning. Suppositories generally work in 15 minutes to an hour.

For preoperative preparation, a combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly.

Dulcolax suppositories may be particularly helpful when straining should be avoided, as in postoperative care. Keep in mind, however, that the drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable
bisacodyl

ense from Boehringer Ingelheim G m.b.H Geigy Pharmaceuticals, Division of Geigy Chemical Corporation, Ardsley, New York 10502 DU-7015

"What she really needs, Doctor, is a shot of penicillin

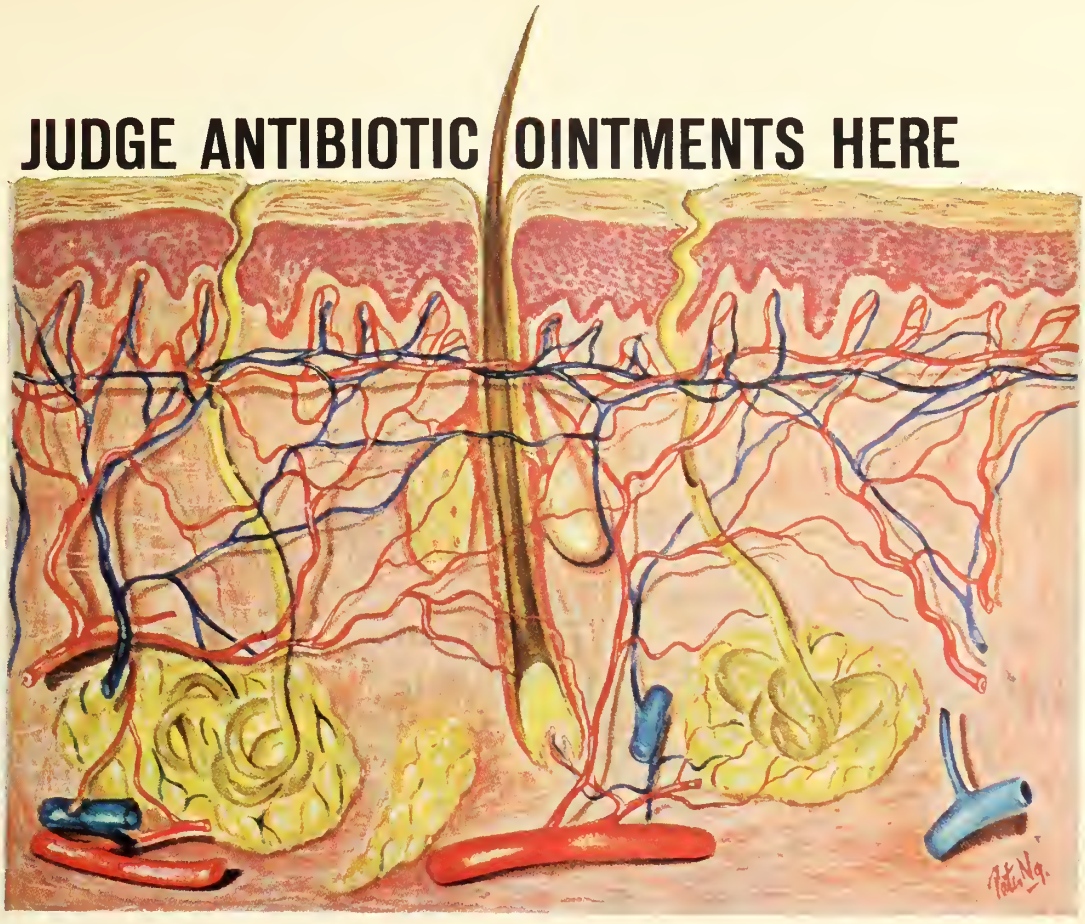
Maybe. Maybe not. In any case she needs something to control her sneezing, watery eyes and runny nose. And for most children over six, Novahistine® LP can be depended on to provide fast relief from summer colds and allergy. These continuous-release tablets have a vasoconstrictor-antihistamine formulation that begins working in minutes, then continues to provide relief for hours. A single Novahistine LP tablet, morning and evening, can keep most young patients free of symptoms all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW THE DOW CHEMICAL COMPANY Rx Pharmaceuticals Indianapolis

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.
Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Equipped for the thyroid emergency?

When an ambulance arrives with the unexpected patient presenting the classical picture of myxedema coma, is your hospital suitably equipped? It is if SYNTHROID® (sodium levothyroxine) injectable is at hand. You are also ready to conveniently handle post-operative thyroid medication situations until oral therapy can be reinstated.

In tablet form this single entity synthetic thyroid provides smooth, predictable response for thyroid replacement. An excellent drug for long-term therapy.

But in an emergency, when rapid replacement is needed to sustain life, prompt clinical response is essential. SYNTHROID injection makes this therapy instantly available. Is it available in your hospital?

Levothyroxine has a high binding capacity for serum proteins in contrast to other thyroid medicaments that may contain a thyroactive agent with low binding capacity. *The bound levothyroxine is totally measurable using the serum PBI test. It is not unusual to find PBI levels of 8-10 mcg. per 100 ml. of serum.*

INDICATIONS: SYNTHROID (sodium levothyroxine) INJECTION is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. It is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When a patient does not respond to oral therapy, SNYTHROID (sodium levothyroxine) INJECTION may be administered intravenously.

PRECAUTIONS: As with other thyroid preparations, overdose may cause diarrhea or cramps, nervousness, tremors, tachycardia, insomnia and continued weight loss. These effects may become apparent in from 4 days to three weeks. Therefore, patients should be kept under close observation. Medication, in such cases, should be stopped for 2 to 6 days, then resumed at a lower level. In patients with diabetes mellitus, look for possible changes in metabolic activity which may affect insulin or other antidiabetic drug dosage requirements.

CONTRAINDICATIONS: Thyrotoxicosis, acute myocardial infarction.

SIDE EFFECTS: Side effects are secondary to increased rates of body metabolism: sweating, heart palpitations with or without pain, leg cramps, weight loss, diarrhea, vomiting and nervousness. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. In most cases, a reduction in dosage followed by a more gradual adjustment upward will indicate the patient's dosage requirements without the appearance of side effects.

DOSAGE AND ADMINISTRATION: In myxedematous stupor or coma, with no evidence of severe heart disease, 200 to 400 mcg. of SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utilizing a solution containing 100 mcg. per ml. Detectable effects are usually observed by the sixth hour after injection and are fully appreciated during the following day. A repeat injection of 100 to 200 mcg. may be given on the second day if significant improvement has not occurred. The intravenous use of sodium levothyroxine in myxedematous coma is advantageous because it produces a predictable increase in the concentration of protein-bound iodine, eliminates the need for multiple doses until oral therapy is reinstated, circumvents the uncertainty of oral absorption, and avoids the risk of pulmonary aspiration.

SUPPLIED: SYNTHROID (sodium levothyroxine) INJECTION is supplied in 10 ml. vials containing 500 mcg. of lyophilized active ingredient and 10 mg. of Mannitol, N.F.; a 5 ml. vial containing Sodium Chloride injection, U.S.P. is provided as diluent.

Also supplied as SYNTHROID (sodium levothyroxine) TABLET in color coded compressed tablets, and in seven strengths: 0.025 mg. (orange), 0.05 mg. (white), 0.1 mg. (yellow), 0.15 mg. (violet), 0.2 mg. (pink), 0.3 mg. (green), and 0.5 mg. (blue). Each strength is supplied in bottles of 100 and 500 tablets.

Synthroid®
(sodium levothyroxine, FLINT)
Injection

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 53; Tulane 1944; seeking solo, group or associate practice. LW-7

Age 27; Medical College of South Carolina, 1966; seeking location in Gadsden area or in southern part of state in town of 5-7,000 population; available July 1, 1971. LW-7/1

Bristol University, 1955; seeking solo or associate practice. LW-7/2

Age 29; University of Missouri 1967; National Board, seeking associate or solo practice in city of 50,000 or less population in south Alabama. LW-7/6

Internal Medicine—

Age 31; Albert Einstein College 1964; National Board; seeking group, associate or institutional practice. Available July 1971. LW-13

University of Missouri 1964; Board eligible; seeking group, or institutional practice. Available July 1971. LW-13/1

Age 31; Medical College of Georgia 1963; seeking location for practice of internal medicine-cardiology. Available 1970. LW-13/2

Age 32; Albert Einstein 1964; National Board, seeking group, associate or institutional practice. Available July 1971. LW-13/3

Age 35; University of Chile, 1960; Board eligible; seeking institutional practice. (Clinical Hematology) LW-13/4

Age 34; Louisiana State University 1963; Board Certified; seeking group practice. Available August 1971. LW-13/5

Age 31; Medical College of Alabama 1968; National Board; Available July 1972. LW-13/6

Neurology—

Age 44; Johns Hopkins 1950, Board Certified; seeking solo, group, institutional or other practice. Available September 1970. LW-14

Age 36; Duke University 1957; seeking solo, group or associate practice in Neurosurgery. Available January 1971. LW-15

Orthopedics—

Age 28; Louisiana State University 1966; Board eligible; seeking associate practice. Available August 1971. LW-16

Otolaryngology—

Age 33; Duke University 1962; Board eligible; Available late 1970. LW-17

Pathology—

Age 41; Louisiana State University 1956; Board Certified; seeking solo or associate practice. Available late 1970. LW-20

Age 44; University of Santo Tomas 1953; Board eligible; seeking solo, associate or institutional practice. LW-21

Age 48; George Washington University 1947; National Board; seeking industrial, institutional, or associate practice in Birmingham, Montgomery or north Alabama. LW-21/6

Age 35; University of Miami 1962; Board eligible; seeking solo or associate practice. Available September 1970. LW-21/6

Age 30; University of Texas 1967; seeking solo, group or associate practice. Available March 1971. LW-22

Age 64; University of Illinois 1927; Board Certified; seeking institutional practice. Available September 1970. LW-23

Pediatrics—

Age 37; Tulane 1959; Board Certified; seeking group or associate practice. Available late 1970. LW-25

Radiology—

Age 28; Northwestern University 1964; completing radiology residency. Available July 1971. LW-24

Age 39; State University of New York 1957; Board Certified; seeking solo, group, industrial, associate or institutional practice. Available September 1970. LW-24/1

Age 32; Medical College of Alabama 1963; completing residency in radiology. LW-24/2

Surgery—

Age 34; New York University 1961; Board Certified; seeking solo, group, or associate practice (also plastic surgery) Available September 1971. LW-31

Age 32; University of Minnesota 1963; Board Certified; seeking group, associate or institutional practice. Available September 1971. LW-31/1

Age 31; Johns Hopkins 1964; Board Eligible; seeking solo, group, associate or institutional practice. Available July 1971. LW-31/2

Age 36; Emory University 1959; Board certified; seeking associate practice. Available September 1970. LW-31/5

Age 31; Medical College of Alabama 1964; National Board; Available July 1971. LW-31/6

Physicians Wanted

Special Openings—

Qualified specialists wanted for private practice in internal medicine, general surgery, Ob-Gyn, general practice, pediatrics, anesthesiology, orthopedics, and other sub-specialties. Office space in 250-bed private hospital, Guaranteed initial income and other benefits. PW-17

Student Health—additional position has just been authorized. Join staff of seven full time physicians plus mental health, and full laboratory, x-ray, physical therapy and dietary services. Negotiable salary. Excellent fringe benefits. Cultural advantages of University community. PW-18

General surgeon, Board certified, needs young associate to do general practice including obstetrics. Salary negotiable. PW-19

Two physicians, ages 39 and 40, are interviewing for a select individual to enter association in a university town of 80,000 population. Outstanding new physical plant. Readily available hospital privileges. Four and one-half day work week. Three free weekends per month. PW-19/2

Specialist in the following fields: Internal Medicine, Pediatrics, Obstetrics-Gynecology and General Practitioners. 58-bed fully accredited general hospital with 91-bed addition recently completed. Modern new office space available. PW-20

Pediatrician, Internist, and ENT specialist to join a well-established group practice in a community of 40,000 in East Alabama. The community has a 125-bed accredited hospital, 32-bed extended care facility. Good transportation on interstate with quick access to metropolitan area. Will pay travel expense for interview. PW-20-1

Opportunity for ENT, Internal Medicine, and Orthopedic Surgery practitioners to join partnership at clinic located in city of 38,000 population in trade area of 150,000 population in northeast Alabama. PW-20/2

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Position available for a clinic physician with special Family Planning Project of the Jefferson County Department of Health. Salary range $20,000 to $24,000, depending on amount of training in Obstetrics and Gynecology and Family Planning. PW-26/1

Obstetrician-Gynecologist—

Excellent opportunity for a trained Ob-Gyn man, who would join a two-man partnership in city of 30,000 population located in south central Alabama. Salary is proposed for the first year, with partnership thereafter. PW-25

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Opportunity in town of 4,000 population in trade area of 50,000 population, located within 100 miles of two metropolitan areas in south Alabama. Industrial and farming area. 44-bed hospital. Office space and equipment available in new building with another physician. Several churches, schools, and service clubs. PW-1

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

For town of 10,000 population in county of 40,000 population located in scenic mountainous section of Northeast Alabama. Office space and equipment available. Hill-Burton hospital-nursing home. Expanding industries in top agricultural area. PW-1-2

For community of 2,000 population, plus large trade area, located in Southeast Alabama. Modern clinic, fully equipped. PW-1-3

Heaven is going to be a miserable place to those people who are never happy unless they have something to complain about.

A man has two eyes so that he can keep the other one on his wife.

Respondeat Superior

Douglas Evans, J. D.
Director, Legal Legislative Affairs

Respondeat superior literally means "let the master answer." This doctrine was originally developed for the purpose of allowing an aggrieved plaintiff injured by an agent or servant, to be compensated by the master, since in most cases the servant causing the injury was in no position to pay.

Under the doctrine today, it is settled law that a physician can be liable for the negligence, and intentional torts of his servants and agents, if the negligent or intentional act was committed in the course of the employment. Under this doctrine the law divides an employment relationship into two categories. 1. Master and servant. 2. That of principal and agent. The distinctions between these relationships are:

1. An agent has power to act for his principal (ie employer) in a representative capacity, for example, in the execution of contract. Agents generally do not do physical work for their principals, and they are not necessarily subject to the direct control of their principals. Therefore, we find that when one person appoints another to act in his place, the foundation of liability arises from the fact that he has assumed to act as the agent of the other person. The basis for making the principal answer for torts committed by an agent is that the agent acts on the behalf and for the benefit of his principal; and therefore, the principal must answer for torts committed by the agent in the scope of his employment.

2. A servant is one who performs work for another under an arrangement through which he is subject to the other persons control with regard to the work to be done, and the manner of performing it.

If a person is either a servant or agent of a physician, the physician is liable for that person's tort committed within the scope of the activities performed for the physician. Compensation from the physician to the person in question is often important in showing an agency or servant relationship. However, compensation is by no means essential to establish either relationship.

3. Independent contractor. This is a person who is engaged to perform a specific job, usually for a fixed fee, and under an arrangement whereby he is not subject to the control of anyone, but is answerable only for the result reached. Professional persons acting on their own initiative without the direction of others, are generally regarded as independent contractors. A person who engages an independent contractor is not liable for any wrongs committed by the latter. Thus, by way of example, we see that if a person sent his chauffeur to pick up a package at the depot, and he negligently struck a pedestrian en route, the master would be liable for the servant's tort. However, if the same master telephoned a trucking company and contracted to pay a fee for delivery of the package, he would not be liable for any tort committed by the employees of the trucking company, since they would constitute an independent contractor.

In *Moulton* v *Huckleberry,* (Oregon); defendant surgeon had a going practice and a small two-bed hospital. Having to go away for a few weeks, he prevailed on another doctor to work for him during his absence at a flat fee of $5 per day, treating any of defendant's patients who might come, using his nurse, place of business and instruments and leaving it to defendant to send out charges for treatment rendered. Plaintiff suf-

(Continued on Page 165)

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrachloride 0.014 Gm., sulfanilamide 1.05 Gm., allantain 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream – Four-ounce tube with or without applicator. Suppositories – Box of 12 with applicator.

TRADEMARK: AVC AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

(Continued from Page 162)

fered injury as a result of alleged negligence of the other doctor and brought a malpractice action against the defendant. Defendant contended that the other doctor was an independent contractor, not subject to supervision, and that defendant could not be made to answer for his negligence. The court held that defendant was responsible for the dereliction of the other doctor. It was significant that the defendant had not relinquished control over his patients but simply had arranged to have them treated by a proxy. i.e., an agent. It is not clear whether this case would be followed by the Alabama courts.

The law is much clearer when a substitute physician is selected or recommended for a given patient. In *Donald* v. *Swann,* Ala., the court recognized the general rule that a physician who recommends or sends a substitute upon becoming unable to fill a professional engagement is not liable for the negligence of the substitute unless the latter is his partner, assistant, employee or agent. The test is whether the substitute is given full power of control and discretion over the case, in the same way as any new physician whom the patient might select in the original physician's absence, free to arrange his own fee with the patient and free to use his own judgment in treating the case.

As a precaution to avoid the risk of vicarious liability in substitute cases, the leaving doctor should relinquish all control of the patient to a successor whom he believes to be competent; the patient should be informed of the substitution in order that he may consent to it or reject the substitute; and the substitute should be left to deal directly with the patient regarding a fee.

Someone sent by the physician to apply a prescribed treatment in the physician's absence will be presumed to be the physician's agent or employee, in the absence of a showing that the second person is an independent contractor. *Simons* v. *Northern P.R. Co.* (Mont. 1933). It must be clear that the substitute physician is given full control over the case and free to make his own, independent contract with the patient. This question necessarily depends on the facts of the particular case and the customs generally followed by other practitioners in the community. *Stephens* v. *Williams* Ala. (1933).

If the substitute physician is an independent contractor, the selecting physician's only responsibility is to exercise reasonable care in choosing a competent substitute. In *Stohlman* v. *Davis,* (Neb. 1928), a surgeon of over 30 years' experience became ill and turned his patient over to his son who had only three or four years' experience, without notifying or obtaining the consent of the patient. The surgeon was found liable for abandonment of the patient.

Next month: Doctor as agent of the hospital.

Ec-
on-
omy!
Dicarbosil®
ANTACID
Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.
ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Volume 40 **September 1970** **Number 3**

Immunologic Factors In Psychosomatic Disorders

Wallace Marshall, M. D.

Montgomery, Alabama

Dorland[1] defines mind as "The faculty or function of the brain by which an individual becomes aware of his surroundings and of their distribution in space and time, and by which he experiences feelings, emotions and desires, and is able to attend, to remember, to reason, and to decide." Obviously, this includes all functions of the cerebral cortex plus those important subcortical centers where affect and the emotions become nascent. The act of cerebration (thinking) also appears to include such physiologic behavior, which concerns the receipt of environmental information, its storage and its recall upon the individual's volition. This is really the acquisition and the use of knowledge by the individual through his learning processes.

Allow me to stress a highly novel and important concept at this point. It concerns the difference between neural stimulations and neural sensitizations. If I become aware of the approach of a roaring, speeding car through my auditory and visual senses, I might remark about this speeding car and the inherent dangers therefrom. But if the car's occupants fire a shotgun in the air or at me, my reactions might become intensified markedly. I might react by falling to the ground or by shaking my fist. The first episode involved my reactions through hearing and seeing the car, while my responses to the second episode became markedly accentuated because of the shotgun blast. The first scene produced reactions through neural stimuli, while the second event produced sensitizing reactions which were of much greater intensity. Yet, both episodes involved identical neural stimuli and their tracts, but of different intensities. Another major difference was that the first event probably would have been of short duration so far as my memory is concerned. But the last episode would be far longer lasting. I might remember that event for a long time, and I might attempt to find the individuals who fired the shotgun in my direction. Furthermore, the first event probably would have raised my blood pressure for a short time, if at all. But the sensitizing effects from the second scene might have caused glycosuria to have been found in my urine sample. I might never have forgotten such a terrifying experience as was presented by the second episode.

It seems rather obvious that we are dealing with the nature, the size of the dosage, the length of time such stimuli operated and whether or not a similar previous experience had been recorded or encoded within my cerebral archives. In other words, the

---

Dr. Marshall is a member of Faculty in Psychology, Auburn University at Montgomery.

amount and the nature of stimuli seems all important for both episodes. Excessive stimuli therefore appear not alone to be able to stimulate the organism to action, but these possess the important property to sensitize and even to hypersensitize the target areas of perception (cerebral cells) in an individual. This seems to be a very important basic point which has not received enough interest until presently. As with other immunologic reactions, the size of the immunogen or the psychoimmunogen appears to determine the exact nature of the response in any normal individual. It is essentially the body's reaction to injury, if such stimuli happen to be excessive.

The Psyche-Soma Concept

This psyche-soma (mind-body) concept is an unfortunate dichotomy. The brain's physiology is dependent directly upon its functioning parts. Its anatomy should not become severed from the rest of the body's anatomy and physiology. All are integral parts which are dependent upon one another, since its behavioral direction arises from the brain and its component parts as will be mentioned later. This mind-body concept is as nebulous as are faith, hope and charity along with "meaningful dialogue" and the blatant and continual use of "y'know" with one's speech. The following old saw is similarly appropos: What happens to one's lap when he stands up?

Dorfman[2] stressed the importance of the genesis of psychosomatic disorders when he mentioned that Darwin's fight or flight concept at times becomes thwarted by society's imposed standards of civilization and its so-called ethics. Thus, fear, rage and the other emotions may become suppressed for a time, but these tend to emerge through that type of behavior induced through autonomic physiologic functionings or expressions. These behavioral responses have also been termed as psychophysiologic forms of reactions. They function because of frustratory mechanisms which arise from either autogenous or heterogenous sources[3].

The Genesis of a Psychosomatic Diarrheal Reaction

Kindly allow me to digress a bit to explain this reaction more fully. During my early childhood, we had a barn on our home lot. This structure formerly housed Dad's horse, called King. He was a shiny black stallion who seemed to delight in racing and passing every other horse he saw, much to the consternation of my Mother who was taken many times on wild dashes down the streets. But King brought my Dad and his surgical packs in short order to many a farmhouse where a badly diseased appendix was removed as the patient lay on the kitchen table.

But King finally gave way to progress and a 1910 Cadillac which was equipped with shiny brass headlights and windshield braces. The barn then became a clubhouse for our gang. The old harnesses and the horsy odors of that place still remain in my cerebral archives! One noon I shoved open the loft door of the barn. I became aware of a perfect parabola from the urinary stream as I voided from this second story loft. Just then up the driveway appeared my father with another doctor from a nearby community as they parked the Cadillac. They must have observed also this demonstration of Newton's law of gravity, but they never mentioned it to me.

Now we approach the crux of the matter. One day I took the lunch pail to the father of one of our gang. He worked in a local paper mill. But as I returned homeward, I saw billows of smoke and heard the clatter of galloping horses' hoofs accompanied by the clanging gongs of the fire department. I ran in that direction and met another boy who yelled to me that our barn was on fire! Sure enough, when I arrived at the fiery scene, there was my boyhood idol, Chief McGillan, who was shouting orders from the hook and ladder rig as the three snorting and sweaty horses were detached from the firewagon. A giant boiler with a short smoke stack characterized the steamer wagon. It belched sparks surrounded by dense blackish grey

clouds of smoke. Water pressure was increased by the pumping movements from the pistons as they spit out steam which caused the flywheel to spin crazily. Three hose streams of water from this equipment played upon the burning barn. These fire fighters were real heroes!

After the barn had been doused adequately with water, my Dad and Chief McGillan led me to our living room where I was questioned as to who started the blaze. I didn't know, and I still don't to this day.

After the hubbub subsided we had our noon meal. I shall never forget the main dish was chipped beef in a cream sauce on toast. I soon grew ill with severe abdominal cramps, and I left the table and ran upstairs to the bathroom where I had a severe diarrheal reaction. Even years later, the mention of chipped beef in cream sauce would shortly lead to severe abdominal cramps and diarrhea! Here was my first introduction to a psychosomatic manifestation! This example can be reduced to the following formula:

1. Seeing the burning barn
2. Seeing the dish of chipped beef

} abdominal cramps followed by diarrhea

In a way, these behavioral reactions have the earmarks of a conditioned response. But this differs from such a reaction because of 1. its intensity, and 2. its longevity, which are the characteristics of a sensitizing reaction. The mechanisms for the production of both types of reactions are quite similar, to be sure, and appear to be dependent upon sensitizing doses of psychoimmunogens which have been intense in amounts.

Limbic System and Psychosomatics

As Doty[4] stresses so aptly, the external world's stimuli play upon the neocortex, while emotion and affect are spawned by the limbic system which also regulates endocrine and autonomic reactions of the individual. Such can be exemplified by the fight or flight pattern and other motivational behavior such as seeking nourishment, temperature control, sexual behavior, maternal responses, etc. All are associated intimately with the individual's basic needs. Disorders of the limbic system produce psychosomatic difficulties through their autonomic outlets to the target organs or structures.

Exteroceptive (perceptual) stimuli are responsible for learning. Without the ability to perceive harmful stimuli which originate from one's environment, the individual so affected can not respond adequately to such stimuli, and death may ensue at a very early date. Given the all important ability to stimulate, or better still, to *sensitize* the individual and therefore make him aware of danger from toxic and excessive environmental stimuli[5], is an early and necessary form of learning which takes place. It results in cortical cell encoding which produces changes in these receptor cortical cells of a neuroelectrochemical nature. These changes are stored (library theory) and are recalled (memory response) at will through one's volition. These cortical changes follow exteroceptive stimuli and are the main types of cerebration.

Interoceptive stimuli, generated in the neocortex, travel via the Papez-MacLean pathways to the limbic cortex which is believed to produce emotional and affective feelings. It is not known presently how the neocortex can generate such interoceptive neural impulses. However, if one considers the results from exteroceptive stimuli as being able to sensitize or even to hypersensitize the neocortical receptive cells rather than merely stimulate them, perhaps we might have a lead as to how such resultant interoceptive neural discharges of potential may ensue. This is based on the author's use of a Leyden jar-like discharge which may result from hypersensitized states in such overly sensitized cortical cells which may be similar to the cortical discharges which produce dreams. The resultant surmenage of neural potentials then travel through the Papez-MacLean circuitry to the limbic system[6].

Here, again, the question posed previously

reasserts itself. Is it merely neural stimulation which affects these limbic nuclei, or could this be basically a sensitizing process? If it is the latter, an entirely new approach to limbic physiology might ensue, with various possibilities which would not be present with mere stimulation from neural impulses of interoceptive origin. The concept of neural sensitizations to those target organs which can produce psychosomatic effects are important, because hypersensitizing these organs, i.e., the bronchial tree, the gut, vascular tree, etc., might introduce a wide span of immunologic results. Such studies might well produce a plethora of advancements in our knowledge of psychosomatic pathophysiology and its therapy. Why one target area thus succumbs to psychosomatic pathophysiology while another area escapes might be explained through immunologic mechanisms. To my knowledge, such an approach has not been offered.

Limbic System and Psychoses

Some investigators believe the limbic system may be involved intimately with the psychoses. As an example, certain neurochemical changes have been discovered recently in schizophrenic patients. Among these abnormal findings, the sweat of such patients was discovered to contain an abnormal aliphatic material termed trans-2 methyl-2 hexenoic acid which was not found in the sweat of normal individuals[7]. Added to this highly interesting observation, Noval and Mao[8] found an unidentified antigen to be present in an abnormal amount in the serum from schizophrenic patients with the use of an immunodiffusion procedure. This unidentified antigen may later be shown to be composed of two or more antigens. Here again, the decided value from employing immunologic investigative procedures for studying schizophrenic pathophysiology has been demonstrated.

So the limbic system appears involved with certain behavioral abnormalities as exemplified by certain psychoses, and probably also with the formation of psychosomatic disorders. Perhaps the fundamental cause or causes may be related to the hypersensitization of the limbic apparati by excessive interoceptive stimuli which originate from the neocortical centers. Thus the hypersensitization of the receptor organs which are involved with those structures which innervate these tissues may take place. Repeated excessive interoceptive stimuli may be responsible for the overt behavioral abnormalities which are observed with the various forms of psychosomatic pathophysiology. We return to our basic concept that neural stimuli, wherever these occur, not alone stimulate but also might sensitize or even hypersensitize their receptive end organs. As previously mentioned[9] these neural transfers of electrical potential appear to depend upon the size, nature, the length of time these stimuli operate, and upon whether or not previous similar neural stimuli have affected these recipient neural centers in the neocortex or even the limbic system.

Recent studies involving lesion and stimulation investigations of the basal ganglia seem to show the role the globus pallidus plays in the organization and direction of primates for goal oriented behavior. Travis and Sparks[10] of the University of Alabama's Department of Psychiatry have uncovered some highly significant observations about these basal ganglia in which the phenomena of attention and set are implicated.

Environmental stress responses mainly concern the sympathetic nervous system[11], while the peripheral autonomic ganglia, with the hypophysis and brain stem, are concerned with blood pressure and respiratory changes. Digestion and excretion mainly involve the parasympathetic system. In summary, the autonomic nervous system is intimately concerned with the individual's survival, and the hypothalamus serves as a direct link between endocrine physiology and the individual's central nervous system.

Stimulatien vs. Sensitization

The stimulation of the autonomic nervous system produces behavioral reactions to one's

environment. But this behavior is the result from bodily response to environmental changes, which may involve neural stimulations *plus* sensitizing reactions because of such repeated stimuli. Then the ensuing hyper-sensitization of these involved visceral structures becomes apparent. Such sensitizing or hypersensitizing reactions of these affected organs might explain how they become directly involved with psychosomatic disorders. As with the learning reactions in cortical cells, the degree of psychosomatic pathophysiologic changes might be dependent upon the nature, size (caliber) and length of time such visceral (autonomic) stimuli operate, plus whether or not previously associated stimuli have affected such target areas in these same visceral target structural areas. Here, then, is a *modus operandi* for the pathogenesis of psychosomatic diseases. The real importance of the visceral brain or limbic systems now emerges[12].

Investigators employing operant conditioning techniques in the U.S.S.R. and this country have demonstrated that heart rates, blood pressure readings and even hepatic cells may respond to such controlled operant stimuli. Employing such operant (instrumental) procedures, the possibility appears that even psychosomatic disorders might be eventually treated by these same methods. Coupled with the concept that these diseases might be studied and controlled by certain immunologic principles, as this paper has outlined, future improved therapy may well result therefrom.

References

1. Dorland's Illustrated Medical Dictionary, W. B. Saunders Co., Phila., 24th Ed, 1965, p. 932.

2. Dorfman, W.: Closing the Gap Between Medicine and Psychiatry. Chas. C. Thomas, Springfield, 1966, p. 16.

3. Marshall, W.: Learning and the development of frustrations. J. Med. Assoc. St. Ala. 38:622, 1969.

4. Doty, R. W. in Freedman, A. M. and Kaplan, H. I.: Comprehensive Textbook of Psychiatry. Williams and Wilkins Co., Baltimore, 1967, pp. 125-6.

5. Marshall, W.: The psychology of being hurt. To be published in the J. of the La. St. Med. Soc., June, 1970 issue.

6. ....: Normal and abnormal behavior from learning. J. Med. Assoc. St. Ala. 39:40, 1969.

7. Smith, K., Thompson, G. F. and Koster, H. D.: Sweat in schizophrenics: identification of odorous substance. Science, Oct. 17, 1969, p. 398.

8. Noval, J. J. and Mao, T. S. S.: An unidentified antigen present in abnormal amount in schizophrenic serum. Behav. Neuropsychiat. 2:27 (Apr.-May), 1970.

9. Marshall, W.: Immunologic augmentations for learning and psychiatry. J. Med. Assoc. St. Ala. 39:243, 1969.

10. Travis, R. P. and Sparks, D.: Unitary responses and discrimination learning in the squirrel monkey: The globus pallidus. Psychol. and Behavior, The Paragamon Press, Great Britain, Vol. 3:187-196, 1967.

11. Gardner, E.: Fundamentals of Neurology. W. B. Saunders Co., Phila. (5th Ed.), 1968, p. 242.

12. Lief, H. I., Lief, V. F. and Lief, N. R.: The Psychological Basis of Medical Practice. Hoeber Med. Div. of Harper and Row, N. Y., 1963, p. 49.

Everybody's Doin' It!

The wrong turn we took in agriculture 40 years ago was motivated by the same needs and desires that have caused other citizens to turn to government for special privileges, subsidies, and protectionist devices. In fact, many farmers have justified their acceptance of controls, subsidies, and price supports with the excuse that "everyone else is doing it." This might be a plausible argument if it could be demonstrated that the government programs have actually benefited farmers. The opposite is true.

—Charles B. Shuman,
American Farm Bureau Federation

A Measure of Bureaucracy

"I can tell you that taking a toy away from a 4-year-old child is a lot easier than taking paperwork away from a bureaucrat."

—*Commerce Secretary Maurice H. Stans*

The Treatment Of Vaginitis With Quinettes– A Clinical Study

L. Clark Gravlee, Jr., M. D.
Birmingham, Alabama

The most common pathogens causing leukorrhea with its attendant symptoms of pruritus, burning, tenderness and dyspareunia, are monilia albicans, trichomonas vaginalis, and haemophilus vaginalis. Many vaginal infections are of mixed etiology, involving more than one of these organisms. Every physician dealing with this problem has had the disconcerting experience of witnessing the successful treatment of a fungus, only to find his patient still symptomatic and presenting with a typical trichomonas vaginalis leukorrhea. The institution of a second or third course of definitive treatment leads to the prolongation of patient discomfort, and to the escalation of expense. Hence, it occurred to us that this might well be one clinical situation in which a logical combination vaginal insert would be effective against the *group* of organisms most commonly causing leukorrhea.

A preliminary report by Beaton[1], describing his results with such a preparation, led us to an evaluation of a larger group of patients to determine whether or not his results could be duplicated. The vaginal inserts* were identical to those in the preliminary report, and are composed as follows:

Diethylstilbestrol	0.1 mg.
Diiodohydroxyquin	100.0 mg.
Sulfadiazine	500.0 mg.

in a base of lactose, starch, microcrystalline cellulose, tartaric acid, sodium lauryl sulfate and magnesium stearate

This insert is buffered to a pH of between three and four when dissolved to produce the desired acidity of the vagina. It contains diiodohydroxyquin which has been demonstrated as effective against monilia albicans and trichomonas vaginalis. The presence of a 0.5 gm. of sulfadiazine is sufficient for the treatment of haemophilus vaginalis, and the small amount of diethylstilbesterol serves to produce cornification in the atrophic vaginal mucous membrane.

A study by Laskowski[3] has found this insert to be very active in vitro against the different Candida species which commonly habitate man as normal flora organisms, or as disease producers, i.e., 1) Candida albicans, 2) Candida guilliermondii, 3) Candida krusei, 4) Candida parakrusei, 5) Candida tropicalis and 6) Candida pseudotropicalis. Very important is the fact that this inhibitory activity persists even in the presence of protein such as blood. The advantages of continuing therapy through the menstrual cycle are well known in treating monilia albicans.

The high incidence of vaginitis and vulvovaginitis in the U.S., as reported by Giorlando[2] and other investigators, makes the treatment of this condition a primary problem for every physician who treats women.

To evaluate the effectiveness of Quinette vaginal inserts in the treatment of leukorrhea, the study began by selecting 40 patients who were classified into four groups as follows:

a. Trichomoniasis

b. Monila albicans

c. Non-specific (haemophilis vaginalis)

d. A second group of trichomoniasis who were receiving oral Metronidazole

Each of the four groups was to include ten patients. As the study progressed, the need of a larger sampling was noted. Thus, the study was expanded to include 60 additional

*Supplied as QUINETTE Vaginal Insert by Arnar-Stone Laboratories, Inc., Mount Prospect, Illinois 60056

patients with no particular thought of group classification. A gynecological history was obtained from these patients which included age, parity, marital status, history of complaint, and findings of a pelvic examination. The clinical diagnosis was confirmed in the office by hanging drop with Na Cl.

The 100 patients in the complete study were instructed to use one vaginal insert each night for 14 nights, even during menstruation. A second course was instituted when it was necessary. Hanging drop was repeated 14-16 days after the treatment was initiated. The patients were also instructed to use a condom when having relations during the period of treatment.

The following table states the number of patients according to the initial lab diagnosis.

TABLE I

INITIAL DIAGNOSIS OF PATIENTS WHO COMPLETED LAB WORK ON STUDY SHOWING NUMBER OF PATIENTS IN EACH CATEGORY

+ Trich and + Yeast	8
+ Non-specific	13
+ Trich	21
+ Yeast	52
WBC-Negative	1
Wet Drop Negative	1
Negative Smear	1
Negative (only bacteria)	1
Total	98

Besides the 98 patients in the above table, six other patients were placed on the program and who stated they were free of symptoms after the treatment and did not wish to return to the office for the final lab test. By initial diagnosis, these can be categorized as follows:

+Yeast	2
+Trich	3
WBC & Bacteria	1
Total	6

This makes a total of 104 patients who were placed on the program with 98 of them completing all lab tests.

The following tables show the results of the patients in the categories according to their initial lab diagnosis. The lab results at the end of the first 14 days of treatment and at the end of 28 days of treatment are given.

TABLE II

PRE-TREATMENT DIAGNOSIS: + Yeast and + Trich

Total number of patients: 8

Post Treatment Diagnosis (14 days)		Follow-up Treatment Diagnosis (28 days)		Results
+ Yeast and -Trich	3	-Yeast and -Trich	1	Cured of trich in 14 days and yeast in 28 days
		+Trich and +Yeast	1	Cured of trich in 14 days, both returned
		+Trich and -Yeast	1	Patient cured of yeast in 14 days, of trich in 42 days
+Yeast and +Trich	1	-Trich and -Yeast	1	Cured in 28 days
-Trich and -Yeast	4	Not necessary		All 4 patients cured in 14 days

From the above table it is noted that of the eight patients who had a pre-treatment diagnosis of +yeast and +trich, four of them were cured in 14 days. One additional patient was cured of trich in 14 days and of yeast in 28 days. One additional patient was cured of yeast in 14 days, of trich in 42 days. Another patient was cured of +yeast and +trich in 28 days. One patient was cured of trich in 14 days only to have trich and yeast show up positive on the follow-up lab test. Therefore, out of the eight patients one was not cured.

TABLE III

PRE-TREATMENT DIAGNOSIS: +Yeast

Total number of patients: 52

Post Treatment Diagnosis (14 days)		Follow-up Treatment Diagnosis (28 days)		Results
-Yeast	33	Not necessary		All 33 cured after 14 days of treatment
+Yeast	19	-Yeast	6	These 6 cured after 28 days of treatment
		+Yeast	11	Eight not cured after 28 days of treatment, 1 not cured after 28 days of treatment and given another medication, and 2 were improved but not cured
		Unknown	2	The follow-up lab work after 28 days is unknown. One of these patients was given another medication after 14 days.

From the above table it is noted that 33 out of the 52 patients with +yeast were cured after the first 14 days of treatment and six were cured after 28 days of treatment. Thus, 39 of the 52 patients with +yeast were cured.

TABLE IV

PRE-TREATMENT DIAGNOSIS:
+Non-Specific

Total number of patients: 13

Post Treatment Diagnosis (14 days)		Follow-up Treatment Diagnosis (28 days)		Results
+Trich	2	Unknown	1	Symptoms worse after 14 days and patient started on Flagyl which worked
		-Trich	1	Cured of both in 2 months
+Yeast	2	-Yeast	2	Both cured in 28 days
-Non-specific	9	Not necessary		All 9 cured in 14 days

Out of the 13 patients with a +non-specific diagnosis, nine were cured after the first 14 days of treatment, two cured in 28 days, and another cured in two months. One patient was given another medication. Therefore, 11 out of 13 patients were cured in 28 days.

From the next table it is noted that of the 21 patients with the pre-treatment diagnosis of +Trich, 14 of them were cured in 14 days, three were cured in 28 days, and another patient was free of symptoms in 14 days, but had a trace of yeast. Three patients were not cured of trich. One patient was not cured in 28 days. One patient was given another medication at the end of 14 days and another patient was given another medication at the end of 28 days. Thus, out of 21 patients 18 were cured in 28 days.

TABLE V

PRE-TREATMENT DIAGNOSIS:
+Trich

Total number of patients: 21

Post Treatment Diagnosis (14 days)		Follow-up Treatment Diagnosis (28 days)		Results
+Trich	6	-Trich	3	Cured in 28 days
		+Trich	2	1 patient not cured in 28 days, 1 patient given another medication after 28 days
		Unknown	1	1 patient given Flagyl after 14 days
-Trich	14	Not necessary		All 14 cured in 14 days
+Yeast and -Trich	1	Unknown		Patient free of symp- in 14 days, but had trace of yeast

The following table gives the lab results on the remaining four cases:

Pre-Treatment Diagnosis:
WBC Negative 1

Post Treatment Diagnosis (14 days)	Results
Negative	Cured in 14 days

Pre-Treatment Diagnosis:
Wet Drop Negative 1

Post Treatment Diagnosis (14 days)	Results
Negative	After 7 days patient free of leukorrhea and dyspareunia

Pre-Treatment Diagnosis:
Negative Smear 1

Post Treatment Diagnosis (14 days)	Results
+Trich	Patient transferred to Group D and was free of symptoms in 14 days, but did not return to office for lab test.

Pre-Treatment Diagnosis:
Negative (only bacteria) 1

Post Treatment Diagnosis (14 days)	Follow-up Treatment Diagnosis (28 days)	Results
+Yeast	-Yeast	Cured, yeast developed after 14 days. Medication repeated.

Of these four patients, three were cured according to the lab results and another stated that she was free of symptoms on the phone.

Included in the preceding tables were five patients who were given another medication either at the end of 14 days or at the end of 28 days. The following table is a summary of the pre-treatment diagnosis, the post-treatment diagnosis (14 days), the follow-up treatment diagnosis (28 days) and the results of these five patients.

TABLE VI

SUMMARY TABLE OF FIVE PATIENTS WHO WERE GIVEN ANOTHER MEDICATION

Pre-Treatment Diagnosis	Post-Treatment Diagnosis (14 days)	Follow-up Treatment Diagnosis (28 days)	Results
+Trich	+Trich	No follow-up after 14 days	Given Flagyl
+Non-specific	+Trich		Symptoms worse after 14 days. Patient started on Flagyl which worked.
+Yeast	+Yeast	+Yeast	Not cured in 28 days. Patient given another medication.
+Trich	+Trich	+Trich	Not cured after 28 days. Given another medication.
+Yeast	+Yeast		Patient had no itching after 14 days. Patient returned with +yeast. Given another medication.

The following is a listing of symptoms which were recorded on the initial visit, after the first 14 days of treatment, and after 28 days of treatment with the number of patients complaining of each.

TABLE VII

NUMBER COMPLAINING OF FOUR SYMPTOMS ON THE INITIAL VISIT, AFTER 14 DAYS, AND AFTER 28 DAYS

Symptom	No. Complaining On Initial Visit	No. Complaining After 14 Days	No. Complaining After 28 Days
Leukorrhea	45	29	12
Pruritis	32	20	9
Burning	25	16	4
Dyspareunia	14	8	3
Totals	116	73	28

The above table does not reflect improvement of symptoms, but rather complete relief of symptoms.

From this study we can conclude that the Quinette insert is a simple, acceptable, and highly effective method with few side effects of treating leukorrhea with its accompanying symptoms.

From the Gravlee-Wideman Clinic, P. A., Birmingham, Alabama.

The author wishes to acknowledge with thanks the cooperation and assistance of Kane Zelle, MD, Arnar-Stone Laboratories, Inc., Mount Prospect, Illinois.

The author also wishes to thank Janeene Gravlee for assistance in compiling this paper.

Submitted for publication June 30, 1970.

Bibliography

1. Beaton, James H.: An Aggressive Plan for the Treatment of Vulvovaginitis. Current Therapeutic Research, Vol. 11, No. 5, May, 1969, pp. 242-246.

2. Giorlando, S. W.: Vaginitis: Diagnosis and Treatment. Clin. Med. 73:33-35, June, 1966.

3. Laskowski, Leonard F.: personal communication dated June 6, 1969.

To Choose My Own

"Most of us, I feel certain, have had experiences that sharply forced us back to reality (from new theories for the delivery of health care). A few days ago a knowledgeable engineer sat opposite to me in my consultation room when I remarked that one of our committees was examining alternative methods for the delivery of health care. His reply was an unequivocally succint: 'I don't know what you are up to, doctor, but please allow me to select my own physician.'"—Edward A. Burkhardt, M. D., President, Medical Society of the County of New York.

There's no such thing as a bargain; if it's fairly priced, it's over-taxed.

To some people time is but a toy, painted by a doll maker, on a rag wrist.

The reason middle age is so tough on a woman is that other people quit thinking that her husband is her father.

Travel Rewards 50 Years Of Practice

Once upon a time there was a hardworking Birmingham pediatrician who dreamed of the day when others would relieve him of a part of his responsibilities, and there would be time for travel. And so in his latter years it came to pass.

Dr. Kennedy

Hughes Kennedy, Jr., whose M. D. degree from Harvard in 1921 qualifies him for membership in the proud 50-Year Club of the Medical Association of the State of Alabama, is that Birmingham pediatrician. Much of the work-load of an office filled with little patients is lifted from his shoulders by his two younger associates, Dr. William C. Crittenden and Dr. Hughes Kennedy III, the latter a co-subject last November in a "Fathers and Sons in Medicine" article.

Dr. Kennedy's travels started eight years ago; when he went to a meeting of the International Academy of Pediatrics in Lisbon, Portugal, by way of England and Western Europe. Three years later he saw Scandinavia from one end to the other, and two years after that he went to Expo 67 in Montreal.

In 1968, Dr. Kennedy spent six weeks in Japan, Hong Kong, Taipei, Bangkok and Phnom Pennh. He saw the ruined temples at Siem Reap and, in flying from Hong Kong to Phnom Pennh, his plane actually landed in Saigon for an hour. Last year he went to the Pacific Northwest and part of southern Alaska. Andin May of this year he returned to England, Scotland and Ireland.

This is Alabama's Sesquicentennial Year. Sesquicentennial means that it takes 150 years to learn to pronounce it.

As Insurance Skyrockets

THE MEDICAL OFFENDERS, by Howard R. and Martha E. Lewis Preface by James L. Goddard, M. D., Simon and Schuster, New York, 376 pages, indexed—$7.95.

"The next time you visit a physician, the odds heavily favor that you will get good care at a fair price," the authors declare at the very opening of their book. But their book is not about this "heavily" favorable prospect. Their concern is entirely with the incidents of error and the reluctance of other doctors to explore causes and punish offenders.

Between the introduction and the foreword by a former Commissioner of *FDA* at the start and the four appendixes at the finish the book is divided into eight parts, revealingly captioned: "The Crisis in Medical Discipline," "Exploiting the Patient," "Felonious Conduct," "Assault and Abandonment," "Negligence and Incompetence," "Mental Illness," "Opposition to Discipline," and "A Call to Action."

Despite the fact . . . and *because* of the fact that this book is aimed primarily at the layman, it should be read by every M. D. concerned with the distorted image of medicine and the rising tide of malpractice suits.

—W. J. M., Jr.

Why Get Involved?

"Some have said that it is not the business of private men to meddle with government . . . To say that (they) have nothing to do with government is to say that private men have nothing to do with their own happiness or misery; that people ought not to concern themselves whether they be naked or clothed, fed or starved, deceived or instructed, protected or destroyed."

—*Cato*

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

digitalis-diuretic regimens can put a "potassium squeeze" on the myocardium...

therefore this is the logical potassium-sparing diuretic for the digitalized patient

Aldactone®
(spironolactone)

for unique physiologic advantages which no other diuretic can provide

- Does not cause potassium depletion (as do the thiazides, furosemide and ethacrynic acid) which may increase[1] the effect of digitalis on the myocardium, giving rise to premature systoles, ventricular tachycardia or ventricular fibrillation.
- Unique "safety-valve" action due to competitive antagonism[2] of aldosterone helps prevent excessive potassium retention, since endogenous aldosterone production is increased[3] and counterbalances Aldactone action if the serum potassium level becomes too high.
- Hyperkalemia may occur, especially in severely ill patients with relatively small urine outputs or in patients receiving supplemental potassium. However, with Aldactone, because of its mechanism of action, hyperkalemia[3] should be less likely than with triamterene or other agents which act independently of aldosterone.
- Gradual onset of action avoids the danger[4] of sudden electrolyte and fluid depletion.
- May be effective as the sole diuretic or may be combined with a thiazide, furosemide[5] or ethacrynic acid[6].

Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone, particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops.

Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 per cent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For *essential hypertension in adults* the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient.

For *edema, ascites or effusions in adults* initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For *children* the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight.

References: 1. Dall, J. L. C.: Amer. Heart J. 70:572-574 (Oct.) 1965. **2.** Liddle, G. W.: Ann. New York Acad. Sci. 139:466-470 (Nov.) 1966. **3.** Gantt, C. L.: Diuretic Therapy, DM (Disease-A-Month), Chicago, Year Book Medical Publishers, Inc., 1967, pp. 1-31. **4.** Alexander, S.: Geriatrics 23:131-139 (Nov.) 1968. **5.** Stason, W. B., and others: Circulation 34:910-920 (Nov.) 1966. **6.** Lieberman, F. L., and Reynolds, T. B.: Gastroenterology 49:531-538 (Nov.) 1965.

012

SEARLE
Research in the Service of Medicine
G. D. Searle & Co., P.O. Box 5110
Chicago, Illinois 60680

NO UNPLEASANT SURPRISES In G. U. Therapy

Urised does not present unpleasant surprises; it brings patient comfort with first dose pain relief. Unlike newer antibiotics or sulfonamides, Urised does not create problems. It has a time-tested record of minimal side effects. The patient gets additional psychological reassurance of Uriseds effectiveness by the evidence of the blue urine.

For over 50 years Urised has created physician and patient confidence by providing effective therapy when needed.

Clinically effective for G.U. Therapy[1-5]

FIRST DOSE PAIN RELIEF

For G.U. Frequency—Urgency—Burning

URISED®

- **CYSTITIS**
- **PYELITIS**
- **TRIGONITIS**
- **URETHRITIS**

Each blue-coated tablet contains these active ingredients:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.8 mg.	Benzoic Acid	4.5 mg.

Contraindications: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

Warning: Do not exceed recommended dosages.

Precautions: Administer with caution to persons with known idiosyncrasy to atropine and cardiac disease. While under this therapy the urine is blue, patients should be so advised to allay apprehension.

Adverse Reactions: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occurs, decrease dosage. If rapid pulse, dizziness or blurring of vision occurs, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

Dosage and Administration: Adults: Two tablets, orally, four times per day, followed by liberal fluid intake. Older children reduce dosage in proportion to age and weight.

How Supplied: Bottles of 50, 500 and 1,000 tablets.

References: (1) Sand, R.X.: New York St. J. Med. 61:2598-2602, 1961; (2) Renner, M.J., et al.: Hosp. Topics 39:71-73, 1961; (3) Haas, J., and Kay, L.L.: Southwest. Med. 42:30-32, 1961; (4) Marshall, W.: Clin. Med. 7:499-502, 1960; (5) Strauss, B.: Clin. Med. 4:307-310, 1957.

CONAL Manufacturers of Uriceutical® Specialties

Pharmaceuticals, Inc.
Chicago, Illinois 60640

Physician-Patient Rapport A Vital Relationship, Malpractice-Medical Jurisprudence Conference Told

by CHARLES E. HERLIHY, M. D.
Clinical Associate Professor
University of Alabama School of Medicine

A colleague of mine once said, "No one sues a friend." I suppose this could be disputed these days but his remark points up the importance of the physician-patient relationship. Hippocrates outlined a code of conduct in the oath many of us took on graduation day, and I feel certain that all professionals in the health services subscribe to the spirit of it. The Old Testament book of Sirach (Ecclesiastes) bids all to honor the physician because it is from God he derives his skill, and still another writing says that he who despises the physician dishonors God. Yet, in spite of the fact that we have a Protector speaking through inspired words of men, many have learned through painful and costly experience that human effort is quite necessary to perfect the art of interpersonal relating.

The physician—and if you will permit me, I will use that term to include all who provide health services—must have consistently in his awareness the fact that patients are placed in a dependent situation. This may be a new and strange experience, or it may be a re-enforcement, an aggravation, of a pre-existing personality trait. Drawn into this are relatives, friends, acquaintances—all of whom play a role in influencing how the patient reacts to his illness. I recall an article which appeared in the *Armed Forces Medical Journal* some years ago which had to deal with how to handle the hostile relative—how important it is to include the wife, parents or whomever is concerned; how important it is, with the permission of the patient of course, to meet the family, get social history, to offer a word of encouragement; how important it is to check in occasional situations with the relatives by phone or to request them to phone to give a report.

The above observations are based on my feeling that there are some important human

(This is the first in a series of talks given by prominent attorneys and physicians on malpractice and medical jurisprudence.)

needs, psychologically speaking, and, if it is true as Magraw suggests: that psychological factors are at the root of many malpractice cases (A), then a consideration of some of these seems pertinent now. Three of these needs warrant discussion. The list could be longer, but I feel these will bring out the point quite well (and, besides, it would lengthen my talk!). These three needs are: 1) *The need to be noticed,* 2) *the need to be thought worthy or worth something,* and 3) *the need to be needed (or loved).*

The need to be noticed: We humans (and that gets all patients and all relatives) respond with great affection to the person who notices and comments upon—favorably, of course—our dress, hairdo, some interesting mannerism, our name, our origin. This seems so obvious but many do not take advantage of this useful gambit in the game of "Blow in my ear and I'll follow you anywhere."

The need to be thought worth something. To ask the patient's opinion, to include the patient's experience in discussing his illness is to relate to him eyeball to eyeball. He will not feel that you are being condescending. To talk in terms understandable to the patient about how his body functions is a consideration of him. It has been said that many patients know more about the insides of their automobiles than they do about the insides of their bodies, but I wouldn't be too sure what with Plastic Anatoman and Anatowoman, Barbie dolls who are pregnant, television coverage of practically every kind of surgery. With some patients who may lack sophistication, one may make a statement which assumes a certain amount of knowledge but which, at the same time, makes a statement of the point, viz: "As you know, Mr. Jones, a blood clot on the right side of the brain will cause weakness or paralysis of the left side of the body. I believe this is what has happened with your father." Mr. Jones will usually nod in agreement, although it may be that this is the first time he's ever heard such an explanation—a kind of correlative neuroanatomy for the layman. The challenge is even greater for those of us who work in mental health areas. Did you ever try to explain anxiety, or what is depression? Did you ever try to offer a simple, easy-to-grasp explanation of schizophrenia or, worse yet, the outlook in this grave disorder. Patients and relatives will respect us for considering them worth the time we take to communicate to "include them in". No one wishes to be rejected or, worse yet, to be ignored, and there is the danger of doing this via the route of intellectual snobbery. I have heard patients say of their doctors: "He treats me as if I'm a child", or, "He never tells me anything" or, very recently, "Doctors think they are so damned smart"—of course, we must be mindful that, in my specialty, I deal with patients, some of whom by virtue of their specific illness may be more hostile and litigious. It does amaze me, though, that psychiatrists are not sued more than is the case because of the many paranoid patients with whom they deal. We must always respect the dignity of the person—after all, the Good Book says we are a little less than the Angels. It is easy in a *vast,* impersonal institution, like a hospital, (or, I suppose, too in a small, impersonal institution like an outpatient clinic) to respond to patients and their relatives as if they are things to speak of their feelings with casualness, callousness, or even with contempt—"Oh, that doesn't hurt me a bit", or "I don't know why you hurt there", or "Well if you were smart enough to follow directions, you'd feel better." In consideration of this need of the pa-

(Continued on Page 184)

EMERGENCY SERVICE PHYSICIANS FOR FLORIDA'S MIRACLE STRIP:

Physicians to supplement existing fee for service practice in modern expanding 450 bed hospital. Florida license required. Excellent opportunity to reduce your hours of work and maintain standard of living. Write Assistant Administrator, Baptist Hospital, Pensacola, Florida 32501.

With Blue Shield's new plan to pay physicians' usual, reasonable and customary fees, your patients are far less likely to favor methods of government-controlled health care.

BLUE CROSS-BLUE SHIELD OF ALABAMA

®

(Continued from Page 182)

tient to be felt worth something, an old Gaelic saying is apropos for us on the giving end: "Get wisdom but with all your wisdom get understanding."

The need to be needed (or loved): I realize these basics are almost overworked, trite, but there is no force more powerful than the affectional energy generated by a word, or look, or touch which says, "I love you." Dr. Hans Selye, who made such contributions to our understanding of stress and its effects on body systems, said recently that the greatest stresses of all, insofar as production of symptoms and illness are concerned, are hatred, frustration, and anxiety. He said in that same interview that the greatest health advice ever given was that "You love one another". We have been guided in medicine by the dictum, Prunun non nocere (first not to harm); perhaps, it should be Prunun Amare and then Secundun non nocere. Perhaps, a conscious effort in this regard will help to reverse a trend which seems to be giving the art and practice a reputation for becoming a cold, detached, even dehumanizing business. This effort should include all those who are extensions of us—the girls at the switchboard, the information desk clerks, the emergency room personnel, those who man the cashiers' cages, the ward aides—as well as ourselves. Consider the benefits gained from the approach of a kind, thoughtful receptionist who relates empathically to the patient's (or relatives') fears, who calms, soothes, and relieves the anguished spirit, who, in effect, says for us physicians or administrators, "Don't worry, we will take care of you; we won't let anything happen to you." Magraw makes a pertinent point in his *Ferment in Medicine* when he distinguishes the effectiveness of the physician-patient relationship by the extent to which the patients' needs for emotional dependency are met. (B) We will respond to those needs according to our psychological strengths or weaknesses.

I would like to present eight reasons why patients change physicians. These probably would be reasons, too, for the sowing of the seeds of malcontent which must be present for the trees of malpractice suit to bloom. These are from an article by Robert Levoy in the June 1970 issue of *Physician's Management Journal.* (C)

1. He didn't listen or give me enough time. He has an assembly line.
2. He belittled me—made light of my problem—treated me like a child.
3. I was just another patient; he never remembered my name, didn't give me time and handed me a set of mimeographed instructions.
4. I couldn't understand him; he never explained.
5. He always kept me waiting.
6. Inconvenient hours or location.
7. Waiting room overcrowded.
8. He had bad personal habits or mannerisms (bad breath, too familiar with patients, too cold or callous, too impressed with his own importance).

It is interesting that the first five points have to do with being downgraded as a human. Levoy makes the point that professional abilities or fees were hardly ever mentioned.

There is a French proverb which says, "People count up the faults of those who keep them waiting." I would offer that people magnify the faults of those who ignore them, treat them with indifference, or who seem not to care. I will end by offering a short course in Human Relations: (D)

The six most important words: *I admit I made a mistake.*

The five most important words: *You did a good job.*

The four most important words: *What is your opinion.*

The three most important words: *If you please.*

The two most important words: *Thank you.*

The one most important word: *We.*

The least important word: *I.*

Thank you.

—CHARLES E. HERLIHY, M. D.,
Clinical Associate Professor,
University of Ala. School of Medicine

Bibliography

(A) Magraw, R. M., Ferment in Medicine, W. B. Saunders Co., Philadelphia, Pa., Ch. 7, 1966.

(B) Ibid (1) Supra.

(C) Levoy, Robert, Physician's Management, June 1970.

(D) Osler, William Sir, Acquanimitus with other Addresses, The Blakiston Co., Philadelphia, Pennsylvania, 1947.

Everyone Overreacts

Like doctors, these journalists are dedicated to their profession, work long hours, are aware of their responsibilities, and proudly practice an historical code of ethics. When their mode of operation was criticized, like us, they responded with an immediate defense of themselves and their work, assumed the stance of the persecuted, overreacted to the charges, and accused the government of attempting to take away their freedoms and even to take over the industry. Of course they had much better audience exposure for their response than we did.

Like the doctors, in retrospect, they are missing the over-view; they are overlooking the big picture. They do not appreciate the significance of the majority of public opinion, which is difficult to measure in strength because of political overtones. Obviously *the people* are trying to say something.

—*Rocky Mountain Medical Journal*

Freedom From Everything Except Tyranny

False leaders have come among us—seeking more power over our lives and occupations. They have dangled before us a picture of the lush pastures of economic security; we have listened—and followed.

These leaders would have us believe:

—that security is surely to be found in the money bags of government, if we will but permit them to run our business, our farms, our professions, our jobs, and our lives.

—that the source of all security and welfare is the state and that it may not be had except from the state.

—that higher taxes upon our labor and thrift will provide us more welfare.

—that the state will give us more security by spending more than its income and by depreciating the value of money.

—that we may have more abundance if the state limits the harvest of our fields and the yield of our flocks; that prosperity is increased by paying farmers to over-produce, destroying the surplus, and taxing everybody to pay for it.

—that we may have more liberty through more laws and regulations giving more power to the state and to officials, agents, investigators, and bureaucrats in general to supervise and regulate every detail of our lives.

—that American citizens will rise to nobler heights of morality and individual achievement if they trust the state to provide all that is needful.

—that we may enjoy freedom from want, freedom from everything except the greatest of all freedoms—freedom from the tyranny of the state itself.

—Walter R. Youngquist
In the Freeman

What is worth doing..

In 1936 A. E. Smith, professional at Woolcombe, England, recorded the lowest golf score for an 18 hole course. He shot a 55 and was 15 under par. The course at Woolcombe, which measured 4,248 yards, was covered in 4, 2, 3, 4, 2, 4, 3, 4, 3 out and 2, 3, 3, 3, 3, 2, 5, 4, 1 in.

is worth doing well.

Take ACHROMYCIN V, for example. Lederle routinely runs over 1,000 quality control checks on every batch produced. Many, many more than officially required. This extra attention means your patients get what the doctor ordered when you prescribe ACHROMYCIN V: uniform *in vitro* dissolution rate, predictable *in vivo* serum and urinary levels. In short, known biologic availability of tetracycline. And every step in the production of ACHROMYCIN V is in-house controlled right in Pearl River.

ACHROMYCIN®-V
Tetracycline HCl

Performance proved in practice

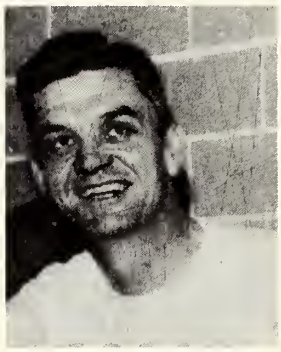
Effectiveness: ACHROMYCIN Tetracycline is a crystalline broad-spectrum antibiotic which provides effective therapeutic activity against susceptible microorganisms. *Contraindication:* History of hypersensitivity to tetracycline. *Warning:* In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Some patients may develop a photodynamic reaction to natural or artificial sunlight. Those with a history of photosensitivity reactions should avoid direct exposure to sunlight while under treatment. Discontinue drug at first evidence of skin discomfort. *Precautions:* Use may result in overgrowth of nonsusceptible organisms. Constant observation is essential. If new infections appear, take appropriate measures. Use of tetracycline during teeth development may cause discoloration of teeth. *Side Effects:* Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity reaction, onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose-related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels have been reported following full therapeutic dosage. This symptom has disappeared rapidly when drug is discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. Tetracycline may form a stable calcium complex in bone-forming tissue. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. *Average Adult Daily Dosage:* One Gm. per day, in 4 divided doses of 250 mg. each. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

281-0

Fathers and Sons in Medicine

The Harrises—Two Generations Of Montgomery Surgeons



PARTICIPATING Sportsmen, each in his own way. Dr. Blue Harris is pictured on the Country Club course, and Dr. Dick Harris as "Chief Substitute and Doctor" for the faculty in the first Student-Faculty basketball game at the Montgomery Academy. He was coach of the students later for the first game in which the faculty bowed in defeat.

"Code Blue" today is an emergency call to intensive care. But a generation ago the name Blue meant something else entirely. It was the surname of two and the nickname of one of the popular and famous members of Montgomery's medical fraternity.

Just where along the course of his early life Homer Perses Harris acquired his nickname is lost to the history of that time. But before his death he was known by no other given name. Even the telephone directory listed him as "H. P. Blue Harris, M. D."

Tall, handsome and ready-witted, Blue was popularly known well beyond the confines of his hospital and the circles of his devoted patients. His skilled artist's fingers were as at home around the shaft of a golf club (more than once he won the Montgomery Country Club title competition) as with the scalpel. Fishing was his second favorite sport.

Blue was born Sept. 10, 1895, in Fayette, Ala., son of the Adley Newton Harrises. He was educated in the public schools of San Benito, Texas, at Alabama Polytechnic Institute (now Auburn University), and at Tulane, from where he received his M. D. degree. He was with the United States Air Service and Medical Corps in World War I, from August, 1917, to May, 1919.

Stuart X. Stephenson in his recently published book of reminiscences recalls "one of the many spectacular golf shots I saw Dr. Blue Harris make while following him on links in Birmingham, Montgomery, Valparaiso and elsewhere. He had made the turn at the Montgomery club course with a three-under-par 33. On No. 13 he hit his tee shot into a wilderness. He hit a one iron out of the rough and rolled to the lower right side of the green. His putt ringed the cup, leaving him a two-incher for the par."

The only child born of the marriage of Dr. Harris and the former Margaret Wilkerson, daughter of an Episcopal minister affectionately known to his Montgomery parishoners as "Parson Dick," was named for both grandfathers, Richard Adley Harris.

Born in Montgomery Oct. 6, 1922, and known as "Dick" from the cradle, this future Montgomery surgeon learned his A-B-Cs in the public schools of Alabama's capital city.

(Continued on Page 191)

vacation in
a vial:
the spasm
reactors
in your practice
deserve

"the Donnatal® Effect"

	each tablet, capsule or 5 cc. of elixir (23% alcohol)	each Donnatal No. 2	each Extentab®
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.
(Warning: may be habit forming)			

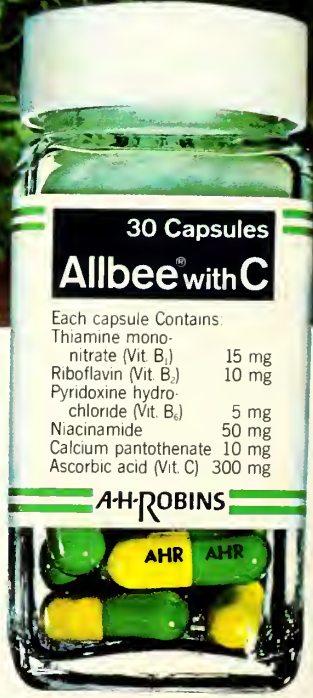
Brief Summary. Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

A·H·ROBINS

2 ways to give your patients a month's therapeutic supply of Vitamin C:

40 pounds of spinach or 30 Allbee® with C



Although raw spinach is an excellent source of vitamin C, your patient would have to eat 40 pounds a month (about 1⅓ lbs. a day) to get as much ascorbic acid as is contained in just one bottle of 30 Allbee with C capsules (taken one capsule daily). If the spinach is cooked, a person would have to ingest more than twice as much because cooking destroys much of the vitamin C, and still more is lost when the liquid is drained off. Allbee with C also contains therapeutic amounts of B-complex vitamins. This handy bottle of 30 capsules gives your patient a month's supply at a very reasonable cost. Also the economy size of 100. Available at pharmacies on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

(Continued from Page 188)

went on to Sewanee Military Academy in Tennessee where he was Cadet Colonel and on the varsity football team, and matriculated at Auburn for an engineering course, changing to pre-med that same year. He went Phi Delta Theta.

Just as his father before him had done, Dick interrupted his education to volunteer for active duty in the Army, and 18 days later was overseas. For combat duty he participated in the invasion of North Africa, Sicily, Salerno, and won the Silver Star for his part in the D-Day invasion of France, plus the French Croix de Guerre.

Home from the war, he returned to Auburn's pre-med classes, married Barbara Tucker of Tuscaloosa, made Alpha Epsilon Delta (honorary pre-med fraternity), graduating in 1947.

Failing health had taken his father from his demanding practice in Montgomery to a more limited practice in Bessemer when he entered Medical School in Birmingham, where he received his M. D. in 1951, and subsequently interned there. His surgery residency was under the late Dr. Champ Lyons, the only resident to serve a full year's fellowship under that famed physician. Fraternity honors showered on him testified to his personal popularity and academic proficiency: ODK, Nu Sigma Nu, Alpha Omega Alpha. Young Dr. Harris completed his residency and returned to Montgomery to practice 14 years ago.

Before he earned his doctorate in medicine, his father's collapsing health had forced him to give up practice altogether, retiring to the Foley-Gulf Shores area, where he died before Dick finished training.

But if Dick was following Blue into medicine and surgery, the father's influence had nothing to do with it. In fact he leaned so far away from influence that he seemed at times discouraging it. At heart, though, he must have been elated, as he resumed at Gulf Shores the piscatorial training begun in his son's childhood.

Honors and recognition in medicine and outside of medicine have come to the son, as they once came to his father. More than that, he has been Senior Warden of St. John's Episcopal Church, where his grandfather was for more than two decades the rector.

The only prospect of a third generation doctor in the Harris family is a 14-year-old, one of five children, a tennis enthusiast who is thinking about studying medicine . . . "but then, I've noticed that lawyers get to play more tennis than doctors."

DOCTORS
Who Play With Fire
(Their Favorite Recipes)

Greek Salad:

In a large salad bowl chop or tear 1 medium sized chilled head of lettuce into bite-size pieces. Add slices or wedges of 1 large cucumber, wedges of 3 celery stalks, ½ medium sized onion diced, wedges of ½ dozen radishes, and wedges of 1 large tomato.

In a separate container prepare the following dressing: Combine 4 ounces olive oil, 2 ounces wine vinegar, 2 crushed medium garlic cloves, 1 tablespoon oregano, 1 teaspoon salt and ½ teaspoon black pepper. Stir until mixture is blended and pour over salad greens. Toss lightly until all greens are coated. Top with 1 dozen black Greek olives and sprinkle liberally with Greek Feta cheese. Anchovies may be added if desired.

This recipe serves 4 to 6.

—John G. Cocoris, M. D.
Birmingham

My wife would make an excellent physician. She let's me do anything I want to do—provided that I don't enjoy it.

The Doctors Winston Edwards Of Alabama

Half a century may seem a long time to wait, but the younger of the Drs. Winston Edwards in this fathers-and-sons-in-medicine article, will qualify for membership in MASA's 50-Year club in 2020 A.D.

By dropping their middle names (Aerson for the elder, and Tacker), this doctor duo becomes senior and junior.

The senior of that name was born on Thursday, Dec. 28, 1911, in the same Alabama town where he is now in general practice—Wetumpka. From grammar school through to his baccalaureate degree and two years of medicine, he remained in his home state, then transferring to the University of Tennessee in 1934, from which he received his M. D. degree two years later.

But his degree in the profession of Aesculapius and Hippocrates was not all he won in Tennessee. In Memphis he found the girl of his dreams and in their marriage they united two of the great professions of American society—medicine and the law. Mrs. Edwards is a graduate in law, qualified to practice in the courts of the land. She is currently Director of the Community Action Committee of the Coosa-Elmore area.

The Edwards have four children and seven grandchildren. Their first-born, Barbara, is today Mrs. James M. Holly IV of Sulphur, La. Mrs. Holly's husband is a chemical engineer, currently superintendent of Columbian Carbon Corporation, one of the nation's large makers of polyethylene. They have four children.

The senior Edwards' second child, Charlene, is today married to Dr. Charles S. Masters of San Antonio, Texas. Dr. Masters is an M. D., at present a resident in Radiology in the United States Air Force. They have one child.

Their other two children are sons, the younger, 14-year-old Thomas R. R. Edwards, a high school junior.

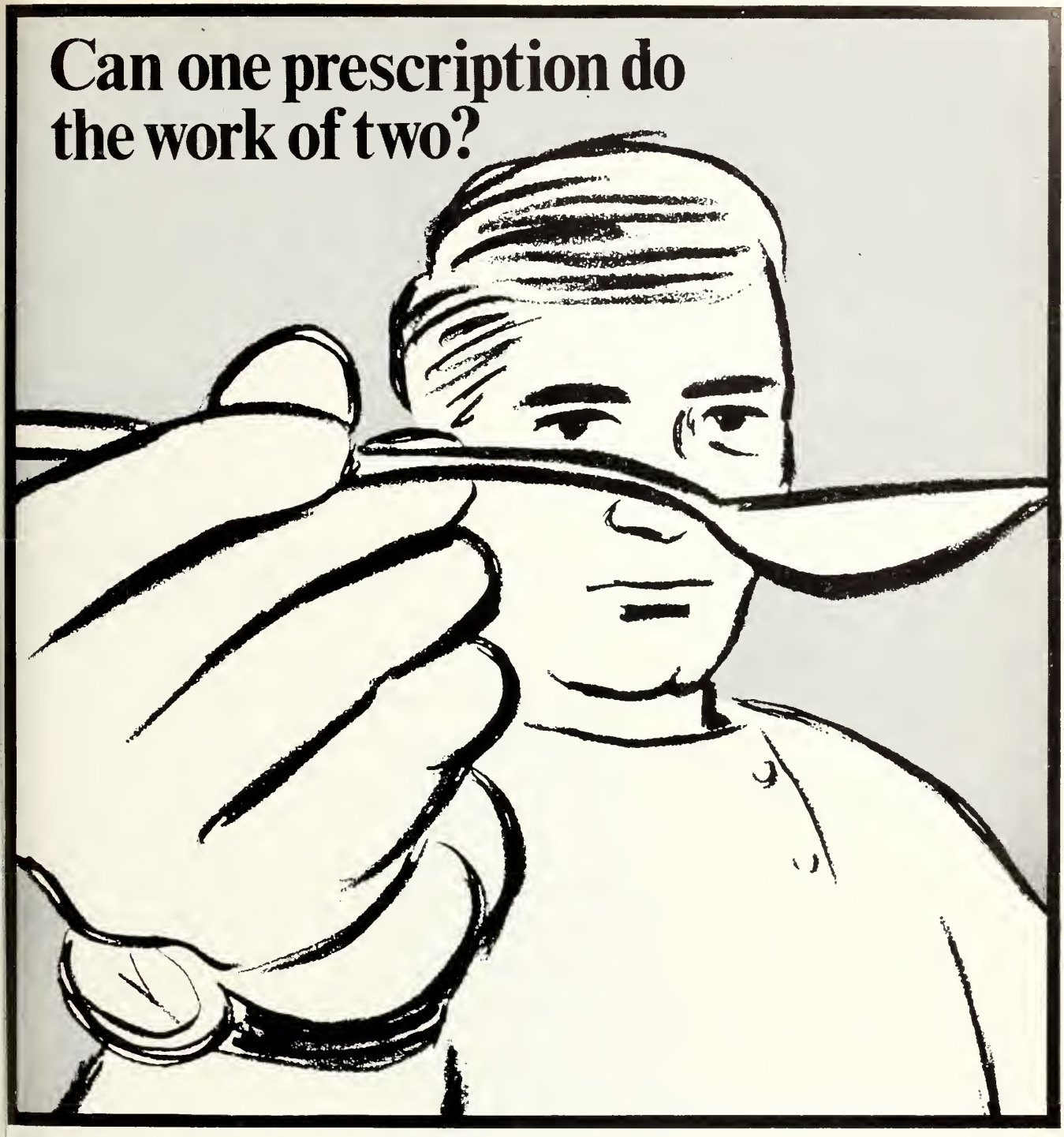
Winston, Jr., the third of their four, the firstborn son, and the second subject of this article, arrived in his mother's native city, Memphis, on Saturday, Sept. 6, 1941, but all of his schooling to now has been in Alabama. He was captain of Wetumpka High's football team, subsequently president of the "W" Club. He was a Kappa Alpha at the University of Alabama, from where he received his baccalaureate in 1963, his Master of Science degree in 1969, and his M. D. in 1970. He is currently interning at St. Vincent's Hospital, Birmingham.

Last fall, as a senior medical student, he spent two months in Haiti, sponsored by the Caduceus Club through the Albert Schweitzer Hospital scholarship, financed by the Mellon Foundation.

Dr. Winston T. Edwards is married to the former Marguerite Whitehead, granddaughter of the nationally known newspaper cartoonist, the late Frank Spangler; daughter of retired Air Force Col. Chauncey B. Whitehead, who was attracting wide attention as an artist in military circles before his retire-

(Continued on Page 194)

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

0-2102 (1832)

(Continued from Page 192)

ment; and who is becoming recognized as an artist in her own right. The junior Edwards have two children.

Returning to the senior member of this doctor duo, Dr. Edwards is very active in both professional and civic circles. He is a MASA Counsellor and a member of two of the Association's important committees: Alabama Hospital—Medical Council and the liaison committee to the Alabama Nursing Association. A past president of the Alabama Chapter AAGP, he is currently its Treasurer and member of the Executive Committee.

A Methodist, member of the Lions Club, Dr. Edwards is a registered Scouter who works on Troop district and council level, is a member of the Board of Directors of the Montgomery Area United Appeal; a past chairman of the Montgomery Area Red Cross, he is now on its Executive Committee; a past chairman of the Regional Blood Bank in Birmingham, he is a life member of its Board of Directors.

Flying Suits in Surgery

The bottom half of those pressurized suits worn by high-flying pilots are proving equally advantageous for patients undergoing neck or brain tumor surgery. Originally manufactured for pilots and astronauts to keep them from blacking out from insufficient blood supply to the brain, the suit allows a person to be operated on in a sitting position (instead of lying face down on his stomach), without blood pooling in the lower extremities. Oxygen is used to inflate the suit and create pressure that actually squeezes blood back to the heart and lungs.

The only suit of this kind in hospital use west of the Mississippi is in Presbyterian Hospital, Pacific Medical Center, San Francisco.

There is a great deal of difference between the eager man who wants to read a book and the tired man who wants a book to read.

—Gilbert Chesterton

50-Year Club Member For '71 Is Dead

The death of Thomas Jefferson Anderson, M. D., a physician in general practice in Greensboro for forty years, reduces to nine the Alabama doctors scheduled for induction into MASA's 50-year Club at the next annual meeting. Dr. Anderson received his M. D. degree from Tulane in 1921.

For many years a leader in civic as well as professional affairs, Dr. Anderson's death reduces the Hale County Medical Society membership from five to four. Survivors include his widow, a daughter, and three sons, two of them doctors. Funeral services were from the Presbyterian Church where he was an Elder and burial was in the Greensboro cemetery.

Not just a motel it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

Schering

After only one year:

Administered to more people than live in Montgomery and Gadsden:*

Injectable Garamycin®
brand of
gentamicin sulfate injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Montgomery and Gadsden is 205,000. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Injectable Garamycin®

brand of gentamicin sulfate injection

Schering

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
	Less Severe	Resistant/ Moderately Severe	Serious/ Life-Threatening
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	0.8-1.2 mg./kg. for 7-10 days	Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	up to 5 mg./kg.
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa*, and species of indole-positive and indole-negative *Proteus, Escherichia coli,* and *Klebsiella-Aerobacter*. Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(44%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa,* 828 (93%); *Escherichia coli,* 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa, Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in dividuals with a history of hypersensitivity or toxic reactions gentamicin.

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with preexisting renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with preexisting renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in who serious infection develops, serum concentrations of the drug m rise, with consequently increased risk of ototoxicity. In these p tients or in those in whom recommended dosage or duration therapy must be exceeded as a life-saving measure, routine studi of kidney function should be performed when possible. These m be supplemented by evaluation of the vestibular and auditory fun tion and measurement of serum concentration of the drug whe feasible. Serum concentrations of gentamicin should be maintain below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to days or be repeated unless required for serious infection not r sponsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectab may occasionally result in overgrowth of nonsensitive organisms. superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity nephrotoxicity have not been established. Studies in pregnant an mals have not revealed teratogenic or ototoxic effects in the fetu GARAMYCIN Injectable should not be used in pregnant patients in women of childbearing age unless its use is deemed advisab by the physician.

Adverse Reactions: The overall incidence of ototoxicity considere related to treatment with GARAMYCIN Injectable was 2.8 per ce (16 of 565 patients). Contributory factors (two or more factors we relevant to most patients) were as follows: 10 had azotemia, received a total of 1 gram or more of the drug, 7 had recently r ceived other potentially ototoxic antibiotics (streptomycin or kan mycin), and 5 were over 60 years of age. Six also had decreas high-tone hearing acuity, which returned to or toward normal the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients show increases in BUN that were probably related to treatment wi GARAMYCIN Injectable. Of 20 increases probably or possibly relat to treatment, 7 were reversible, 9 occurred in terminal patients, a 4 had no follow-up.

Other adverse reactions associated with treatment were one instan each of urticaria, decreased hematocrit, and reversible depressi of granulocytes with normal bone marrow. Other rarely report and possibly treatment-related adverse reactions were anemia, i creased reticulocyte count, rash, purpura, drug fever, hypotensic convulsions, twitching, salivation, nausea, vomiting, increased tra aminase activity (SGOT or SGPT), increased serum bilirubin, creased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-d vials, for intramuscular administration.

For more complete prescribing details, consult package insert Physicians' Desk Reference. Schering literature is also availa from your Schering Representative or Medical Services Departme Schering Corporation, Union, New Jersey 07083.

AHFS CATEGORY 8:12.28 5·

around the state

Five Alabamians Fill Important Posts In AMA And AMPAC

DR. CHENAULT

DR. BURLESON

DR. ADAMS

DR. ROBINSON

With the election of Dr. Paul W. Burleson of Birmingham to AMA's Council on Medical Service and the appointment of Mrs. Belle M. Chenault of Decatur to the Board of Directors of the American Medical Political Action Committee (AMPAC), the number of prominent members of the Medical Association of the State of Alabama in key AMA posts rises to five.

MRS. CHENAULT

Dr. John M. Chenault of Decatur, chairman of MASA'S Board of Censors, is a member of the 12-member Board of Trustees of AMA, his term extending to next year.

Dr. M. Vaun Adams of Mobile, a member of MASA's Board of Censors, an AMA Delegate, is a member of AMA's Council on National Security.

Dr. E. Bryce Robinson, Jr., Fairfield, an AMA Delegate, is a member of the AMA Council on Medical Education, whose term runs to 1973.

Dr. Burleson's election to the Council on Medical Service, one of the four ranking standing committees of the AMA House of Delegates, came on the second ballot, defeating two opponents. He lacked only three votes of winning by a clear majority on the first ballot.

Mrs. Chenault, wife of Dr. John Chenault and retiring president of the Woman's Auxiliary to the American Medical Association, in addition to joining the Board of the American Medical Political Action Committee (AMPAC), serves also as a member of the Auxiliary Board of Directors.

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

His wife has a lot of different menopausal symptoms, but only a few really irritate *him*. Her hot flashes, her vertigo, her palpitations—that's *her* problem. What really bothers him is her nervousness, her irritability and her excessive anxiety, often expressed by endless "book-shuffling, chain-smoking, reading-lamp" insomnia!

Menrium takes care of hot flashes, vertigo, palpitations in most menopausal women. Menrium provides the well-known antianxiety action of chlordiazepoxide (Librium®) and water-soluble esterified estrogens. It therefore relieves more symptoms than either component separately. It takes care of the vasomotor symptoms as well as the emotional symptoms. This means the symptoms that bother his wife most. And the symptoms that irritate him most.

So, to help them both get through her menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

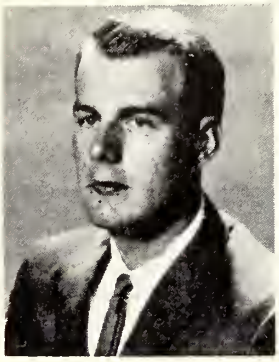
Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

New Physicians Licensed to Practice in Alabama

Larry Dale Brock, M. D., University of Alabama School of Medicine, 1968, Reciprocity with NBME—Intends to locate in Mobile.

William Joseph Moore, M. D., University of Kentucky College of Medicine, 1965, Reciprocity with Kentucky—Intends to locate in Birmingham.

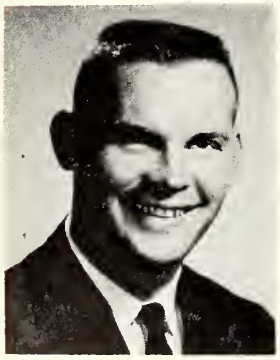


Park Thetford Chittom, M. D., University of Mississippi School of Medicine, 1968, Reciprocity with Mississippi—Intends to locate in Selma (Craig AFB).

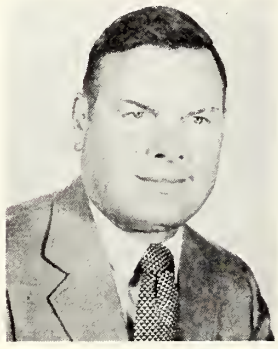
Earl McNichol Rogers, M. D., University of Mississippi School of Medicine, 1964, Reciprocity with Mississippi—Into locate in Decatur.

Eddie Norris Duncan, M. D., University of Tennessee College of Medicine, 1968, Reciprocity with Tennessee—Intends to locate in Montgomery (Maxwell).

Clarence Shub, M. D., University of Louisville School of Medicine, 1968, Reciprocity with Kentucky—Intends to locate at Fort Rucker.



Hurley Walden Knott, M. D., University of Alabama School of Medicine, 1967, Reciprocity with NBME—Intends to locate in Birmingham.



William Francis Wager, M. D., Emory University School of Medicine, 1951, Reciprocity with Florida—Intends to locate in Atmore.

Robert Lynne Mack, Jr., M. D., University of Arkansas School of Medicine, 1962, Reciprocity with Arkansas—Intends to locate in Decatur.

Frank Coleman Young, Jr., M. D., Medical College of South Carolina, 1960, Reciprocity with South Carolina—Intends to locate in Montgomery.

(Continued on Page 203)

THE LEADING MANUFACTURER
OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

FREE CLINICAL SUPPLY

PLASTIPAK
INSULIN SYRINGE/NEEDLE UNITS

Send samples to:

Name _____
(Physician's Signature

Address _____

City _____ State _____ Zip _____

Clip out postcard on dotted line . . . no stamp required

Now you can lower the risk of insulin error when your patient is home . . . and alone

B-D

SINGLE-USE
PLASTIPAK
INSULIN SYRINGE/NEEDLE UNIT

8401 RED CAP u40

8406 GREEN CAP u80

as specific as insulin itself

Postage will be paid by Addressee

No postage stamp necessary if mailed in the United States

BUSINESS REPLY MAIL
First Class Permit No. 134, Fairview, N.J.

Becton-Dickinson and Company
Consumer Products Division
P.O. Box 183
Fairview, New Jersey 07022

Clip coupon on dotted line . . . fill out other side send for physician's free samples

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 0707

color-coded caps and numbers—red for U40, green for U80

presterilized—consistently dependable, and sterility is assured until cap is opened

easy-to-hold, easy-to-handle—even for child diabetics with small hands or adults with stiff fingers

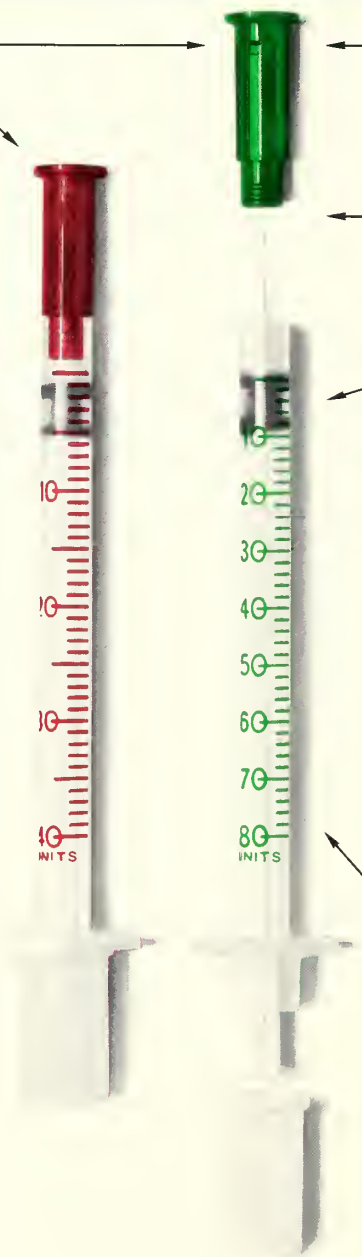
the sharpest needle your patient can buy—far sharper than any reusable needle

pocket-or-purse portable—sturdy from tip to top

integral cannula reduces air bubbles

single-scale PLASTIPAK insulin syringe needle units eliminate the hazard of reading the wrong scale

the first insulin syringe so low in cost your patient can use a new one every time



low cost—barely pennies higher than old-fashioned disposable needles without syringe . . . about as low as a cup of coffee

its single-scale—U40 or U80—minimizes the risk of measurement errors. Your patient *can't* read the wrong scale.

big numbers, wide spaces for easy reading

U40 **U80**

Supplied: in packages of 10—PLASTIPAK syringe U-40 (red) or PLASTIPAK syringe U-80 (green) Prescription required in most states.

BECTON B-D
DICKINSON
Consumer Products Division
Becton, Dickinson and Company
Rutherford, New Jersey 07070

) and PLASTIPAK are trademarks.

Printed

(Continued from Page 200)

Vital Statistics

NEW MEMBERS

Jefferson County

Aldrete, Joaquin S., b 36, mc Univ. of Mexico 58, limited license 69, 1919 7th Ave., Birmingham, Alabama 35233. S

Beckering, Raymond Eugene, Jr., b 36, mc Univ. of Michigan 62, recip. Mich 69, 701 Princeton Avenue S.E., Birmingham, Alabama 35211. Path.

Huber, Francis Christian Jr., b 29, mc Univ. of Tennessee 66, recip. Tenn. 69, 1919 S. 7th Avenue, Birmingham, Alabama 35233. Anes.

Mesel, Emmanuel, b 24, mc Univ. Cincinnati 59, recip. NBME 69, 1919 S. 7th Ave., Birmingham, Alabama 35233. PdC.

Pittman, James Allen Jr., b 27, mc Harvard 52, recip. Florida 61, 700 S. 19th St., Birmingham, Alabama 35233. I

Scokel, Paul William III, b 29, mc Alabama 54, recip. Miss. 59, Longview General Hospital, Graysville, Alabama 35073. ObGyn.

Stover, Samuel Landis, b 30, mc Jefferson Penn. 59, recip. Penn. 69, 1717 6th Avenue S., Birmingham, Alabama 35233. PM

Madison County

Black, John Kendall Jr., b 39, mc Alabama 63, sb 64, 201 Longwood Drive S.E., Huntsville, Alabama 35801. Or.

Montgomery County

Robinson, Paul Irwin, b 04, mc Washington 28, recip. NBME 70, 304 Dexter Avenue, Montgomery, Alabama 36104. PH

Morgan County

Pyron, William Walter, b 39, mc Alabama 64, sb 65, P. O. Box 1057, 1204 13th Avenue, S.E., Decatur, Alabama 35601. Oph.

MEMBERS DECEASED
MEMBERS REMOVED

Jackson County

Howland, Robert Louis Jr., Birmingham, Alabama ..... Moved

Jefferson County

Becton, James A., Birmingham, Alabama ..... deceased 7/16/70

Hammack, W. J., Birmingham, Alabama ..... (Transfer to Nonmember).

Meadows, James A., Sr., Birmingham, Alabama ..... deceased 6/3/70

Noto, Thomas A., Birmingham, Alabama ..... Moved

Riheldaffer, William H., Birmingham, Alabama ..... deceased 7/6/70

Wells, Benjamin B., Birmingham, Alabama ..... Moved

Lee County

Rand, John Hembre, Opelika, Alabama ..... Moved

Mobile County

McVay, Leon V., Sr., Mobile, Alabama ..... deceased 7/6/70

Walker County

Sankey, Howard J. ..... deceased

CHANGES OF ADDRESS

Calhoun County

Mitchell, William B., present Anniston to P. O. Box 1767, Anniston, Alabama 36201

Stallworth, Nicholas R., present Anniston to 822 Lexington Ave., P. O. Box 2123, Anniston, Alabama 36201

Colbert County

Mitchell, James A., present Tuscumbia to P. O. Box 486, Sheffield, Alabama 35660

Dallas County

Cox, Clyde B., Jr., present Selma to P. O. Box 619, Doctor's Park, West Dallas Ave., Selma, Alabama 36701

DeKalb County

Taylor, E. Lee, Jr., present Fyffe to E.I. Dupont Denemours & Company, P. O. Box 1559, Richmond, Virginia 23212

Escambia County

Stuart, Fletcher S., present Brewton to P. O. Box 337, Sewanee, Tenn. 37375

Etowah County

Brown, Andrew M., present Birmingham to 515 S. 3rd Street, Gadsden, Alabama 35901

Rose, Marilyn Jean Michaels, present Gadsden to 406 S. 5th Street, Gadsden, Alabama 35901

Houston County

Hilbert, John F., present Dothan to P. O. Box 1846, 409 W. Main Street, Dothan, Alabama 36301

Jefferson County

Abernathy, Frank, present Birmingham to 2930 N. 16th Street, Birmingham, Alabama 35234

Akin, John M., Sr., present Birmingham to 807 Woodward Building, Birmingham, Alabama 35203

Amato, Simone J., present Maylene to 800 Montclair Road, Birmingham, Alabama 35213

Applebaum, Samuel L., present Birmingham to 609 Woodward Building, Birmingham, Alabama 35203

Ballard, James W., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Baxley, William A., present Birmingham to University of New Mexico, Albuquerque, New Mexico 87106

Bean, Stuart K., present Birmingham to 1500 6th Ave. S., Birmingham, Alabama 35233

Beatty, Dan T., present Birmingham to 1025 S. 18th Street, Birmingham, Alabama 35205

Bennett, Austin LeGrande, present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Bleidt, Leonard C., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Blythe, John C., present Birmingham to 1919 S. 7th Ave., Birmingham, Alabama 35233

Boname, John R., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Brannon, Robert M., present Birmingham to 879 Pine Ridge Road, Birmingham, Alabama 35213

Brown, H. Dale, present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Bruhn, John R., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Brummett, Chester C., present Birmingham to 800 Montclair Rd., Birmingham, Alabama 35213

Burrett, John B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Caceres, Jorge, present Bessemer to 800 Memorial Drive, Bessemer, Alabama 35213

Capra, Charles S., present Birmingham to 7000 5th Ave. S., Birmingham, Alabama 35212

Carmichael, Josiah C., present Birmingham to 801 Princeton Ave. S.W., Birmingham, Alabama 35211

Carter, John C., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Carter, Robert W., present Birmingham to 4128 Sharpsburg Drive, Birmingham, Alabama 35213

(Continued on Page 206)

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

(Continued from Page 204)

Casten, Gus G., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Chenoweth, Beach M. Jr., present Birmingham to 31 Church Street, Birmingham, Alabama 35213

Clayton, Orville W., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Collier, James B., present Birmingham to 1100 Bankhead Highway, S.W., Birmingham, Alabama 35073

Comer, John F., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Cord, Richard H., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Crow, Charles B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Crow, John B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Doggett, William E., Jr., present Tarrant to 1120 Ford Avenue, Tarrant, Birmingham, Alabama 35217

Donald, Charles J. Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Elliott, Claire B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Farmer, T. Albert, present Birmingham to 1919 S. 7th Ave., Birmingham, Alabama 35233

Funderburg, Lonnie W., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Garber, James R., present Birmingham to 512 Euclid Ave., Birmingham, Alabama 35213

painless intramuscular therapy for calcium deficiencies:

Calphosan®

calcium glycerophosphate, calcium lactate

To bring effective calcium therapy to the patient, Calphosan may be administered intramuscularly . . . without pain, inflammatory reactions, induration or sloughing. Injections twice weekly for a series of 5 to 10 injections are recommended.

Average dose per injection: One or two 10 ml. injections of Calphosan each week for the first four or five weeks, and on a when-needed basis thereafter.

Calphosan is a specially processed solution of calcium glycerophosphate and calcium lactate, containing 1% of each, in a physiological solution of sodium chloride. Each 10 ml. contains 50 mg. of calcium glycerophosphate, 50 mg. calcium lactate, with 0.25% phenol as preservative. Available in 10 ml. ampules in boxes of 10s and 100s; 60 ml. multiple-dose vials. Also available as Calphosan with B-12. U. S. Patent No. 2657172.

Contraindication: Hypercalcemia; neoplastic diseases; and fully digitalized patients. Do not use intramuscularly in infants and young children. Before starting therapy, consult complete product literature.

Write for free copy of "Calcium: The Ubiquitous and Essential Element" and for samples.

THE CARLTON CORP

Tenafly, New Jersey 07670

The girth control pill

Tepanil® Ten-tab

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

0915A 1/71

The Month in Washington

From the Washington Office
American Medical Association

A Democratic and a Republican member of the House Ways and Means joined to introduce The American Medical Association's Medicredit plan for federally subsidized national insurance.

The co-sponsors of the legislation (H. R. 14567) were Reps. Richard Fulton (D., Tenn.) and Joel T. Broyhill (R., Va.). Both are members of the House Ways and Means Committee which has jurisdiction over such legislation. Soon after introduction of the Fulton-Broyhill measure, Rep. Omar Burleson (D., Tex.), also a member of the Ways and Means Committee, and Rep. John Jarman (D., Okla.), chairman of the House Commerce Subcommittee on Health, introduced an identical bill. Other members of the house from both major political parties indicated they also would become co-sponsors.

Fulton, who 18 months ago introduced legislation based on the Medicredit principles for financing private health insurance for individuals, told the House that the new bill "represents . . . a vast improvement over its predecessor by reason of the fact that it encompasses a built-in mechanism for cost control." He referred to mandatory peer review.

Speaking for himself and the measure's co-author, Rep. Joel T. Broyhill (R., Va.), Fulton said the time for national health insurance has come.

"And whether we're talking about the Rockefeller approach, the AFL-CIO approach, the Kennedy approach, or the approach taken by the Committee of 100, all

(Continued on Page 210)

—The lowest priced tetracycline—nystatin combination available—

(Continued from Page 209)

of them advocate sweeping changes in our health care system," Fulton said.

"An across-the-board national health insurance plan, operated regardless of need, will carry a price tag of sobering size. And no such plan I have yet seen includes—at least to my satisfaction—a mechanism which promises effective cost control at the taxpayers' money.

"This brings us to an essential element of Medicredit—its provision of peer review. This bill calls for a constant and unremitting policing mechanism."

The other two parts of the Medicredit legislation would provide for the federal government financing or assisting in the financing of medical and hospital care for individuals and their dependents through participation in the cost of insurance policies of their choice—100 per cent premium payment for the low-income groups, and graduated participation in the payment of premiums for other persons, based on their federal income tax liability.

Congress is not expected to take up this year proposals for national health insurance. But reaction to the AMA peer review plan has been highly encouraging, and prospects appeared good that Congress would approve such a plan this year for medicare and medicaid. Sen. Wallace F. Bennett (R., Utah), a senate finance committee member, directed the committee's staff to work with AMA staff representatives in drafting such legislation as an amendment to a bill revising medicare and medicaid.

In a speech on the Senate floor, Bennett said there is deep concern over the high costs of medicare and medicaid. He complimented the AMA on advancing peer review as a means of curbing these costs. He said:

"I believe the American people are justifiably concerned over the tremendous costs of health care. Much of that concern, it seems to me, is a product of a very real feeling that we are not getting what we are paying for. I believe, equally, that much of the apprehension, anxiety, and suspicion now prevalent—for better or worse—with respect to those responsible for health care would disappear if professional standards review organizations were established and functioned effectively. It seems to me that the American people are entitled to know that American medicine shares their concern—and more importantly—proposes to do something substantial about it through means of professional standards review organizations . . .

"I believe that physicians, properly organized and with a proper mandate, are capable of conducting an ongoing effective review program which would eliminate much of the present criticism of the profession and help enhance their stature as honorable men in an honorable vocation willing to undertake necessary and broad responsibility for overseeing professional functions. If medicine accepts this role and fulfills its responsibility, then the Government would not need to devote its energies and resources to this area of concern. Make no mistake; the direction of House-passed social security bill is toward more—not less—review of the need for and quality of health care. I believe my amendment would provide the necessary means by which organized medicine could asume responsibility for that review."

Bennett said that, under his amendment, review groups would have responsibility for reviewing "the totality of care provided patients—including all institutional care." That responsibility he said, would be lodged, "wherever possible and wherever feasible," at the local community level. He said:

"Local emphasis is necessary because the practice of medicine may vary, within reasonable limits, from area to area, and local review assures greater familiarity with the physicians involved and ready access to necessary data. Priority should be given to arrangements with local medical societies—of suitable size—which are willing and capable of undertaking comprehensive professional standards review . . .

"Under the amendment, the Secretary (of

(Continued on Page 215)

I love my family.
I adore this house.
My in-laws are great.
The neighbors are wonderful.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated). Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack]. Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

The young homemake
her underlying anxiety
and tension can surfac
and intensify under the
continuous stress of
rearing a growing fami
Especially when she's
confined to the home a
its environs so much.

You can help her over
the rough spots with
reassurance and couns
Equanil can help reliev
tension, ease anxiety—
with little risk of seriou
side effects. Time and
experience will probab
do the rest.

Equanil®
(meprobamat

Wyeth Laboratories
Philadelphia, Pa.

Photo professionally posed.

Drip stopped, Congestion cleared

For upper respiratory allergies and infections, up to 12 hours clear breathing on one tablet. Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely.

INDICATIONS: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, rhinitis, conjunctivitis, and otitis. CONTRAINDICATIONS: Hypersensitivity to antihistamines. Not recommended for use during pregnancy. PRECAUTIONS: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. SIDE EFFECTS: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. DOSAGE: 1 Extentab morning and evening. SUPPLIED: Bottles of 100 and 500.

A·H·ROBINS

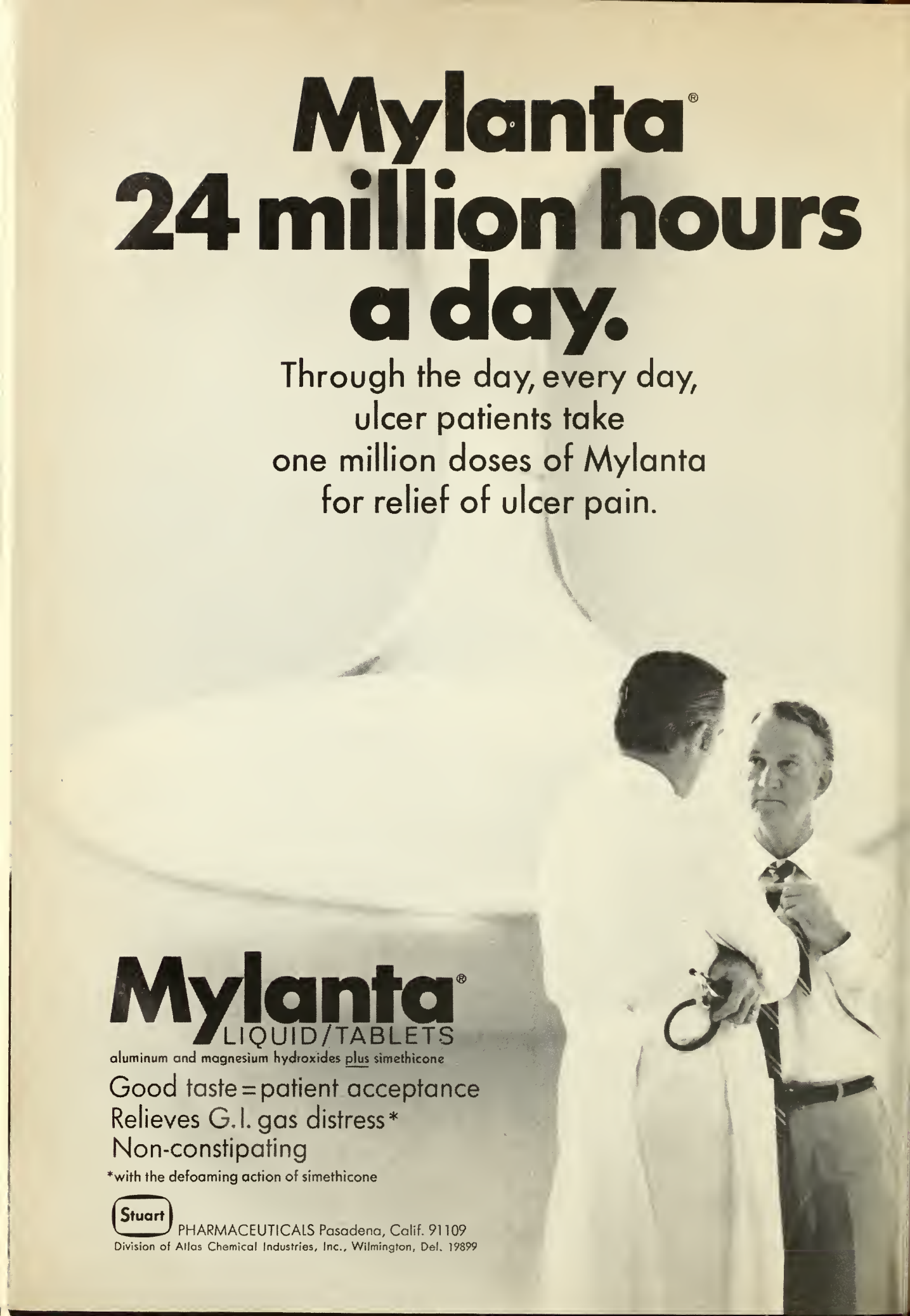
A. H. Robins Company
Richmond, Va. 23220

Dimetapp® Extentabs

Dimetane® (brompheniramine maleate), 12 mg ; phenylephrine HCl, 15 mg , phenylpropanolamine HCl, 15 mg.

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.



Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

(Continued from Page 210)

Health, Education and Welfare) could use state or local health departments or employ other suitable means of undertaking professional standards review only where the medical societies were unwilling or unable to do the necessary work, or where their efforts were only pro forma or token. Let me emphasize as strongly as possible that the thrust of this proposal is to have physicians, as a group, evaluate physicians and the services they provide and order as individuals."

Bennett said that the review committees should determine that only medically necessary services are provided by physicians, hospitals, nursing homes and pharmacies, and that these services meet proper professional standards.

Disciplinary measures, he said, would be in proportion to the offense and could include: 1) monetary penalties, 2) suspension from federal programs, 3) exclusion from federal programs, 4) civil or criminal prosecution, and 5) steps leading to the suspension or revocation of professional licensure.

Concerning the peer review part of his bill —H. R. 18567, "Health Insurance Assistance Act of 1970"—Fulton said:

"The appropriate medical societies would be charged with establishing a peer review mechanism that would, among other things, review individual charges and services, wherever performed; review hospital and skilled nursing home admissions; review the length of stays in hospitals and skilled nursing homes; and review the need for professional services provided in the institution.

"The process of ongoing review can have nothing but a salutary effect on the providers of services, thereby cutting down on the occasional or unintentional abuses that would otherwise occur.

"Patterns of abuse would be detected, and the abusers either suspended from or excluded from the program. Exclusion could follow action by the Secretary of Health, Education and Welfare upon the recommendation of the peer review committee.

"In the case of fraud, or other clear intentional misconduct, the peer review committee would be expected to bring charges before the appropriate licensing body.

"And in the event that a peer review committee was *not* established by the medical society within a reasonable time, or if established was not functioning, the Secretary of HEW, in consultation with the medical society, would be empowered to appoint a peer review committee that would function."

The Fulton-Broyhill bill would provide that an individual having a tax liability of $300 or less in a base year be entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Insurance purchased with such a full-pay certificate would require no beneficiary participation in health care charges. Federal contribution to insurance purchased by individuals under this part of the program would be scaled in favor of low-income taxpayers—from 98% if the taxpayer's base year income tax is between $301 and $325, to 10% when his tax liability exceeds $1,300. Basic benefits in a 12-month policy period would include 60 days of inpatient hospital care. To encourage utilization of less expensive facilities, two days in an extended care facility would count as one day of the 60 days allowed. Other basic benefits would include emergency and outpatient services, and all medical services provided by a doctor of medicine or osteopathy.

A supplemental coverage could provide, in addition, one or more of the following: prescription drugs not otherwise covered, additional days of inpatient and extended care services, blood in excess of three pints, personal health services when furnished on written direction of a physician, diagnostic and therapeutic services, and catastrophic coverage of all hospital and medical costs, up to $25,000, after the first $300 of incurred expenses borne by the beneficiary.

INDEX TO ADVERTISERS

Arch Laboratories 165

Becton, Dickinson & Company 201, 202
Blue Cross-Blue Shield 183
The Bradley Center 205
Breon Laboratories, Inc. 151
Burroughs Wellcome 157

Campbell Soup 177
The Carlton Corporation 206
Classified 153, 182
Conal Pharm., Inc. 180

Dow Chemical Co. 156

Flint Laboratories 159

Geigy Pharmaceuticals 155
Guest House Motel 194

Highland Hospital 216
Hynson, Westcott & Dunning 145

Lederle Laboratories 147, 186, 187, 209, 3rd Cover
Eli Lilly and Company 1st Cover, 166

Wm. S. Merrell Company 193

National Drug Company 163, 164, 207, 208

Wm. P. Poythress 158

A. H. Robins 189, 190, 213
Roche Laboratories 198, 199, 4th Cover

Schering Corp. 195, 196
G. D. Searle 178, 179
Smith Kline & French Lab. 2nd Cover
The Stuart Company 214

Wyeth Laboratories 211, 212

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

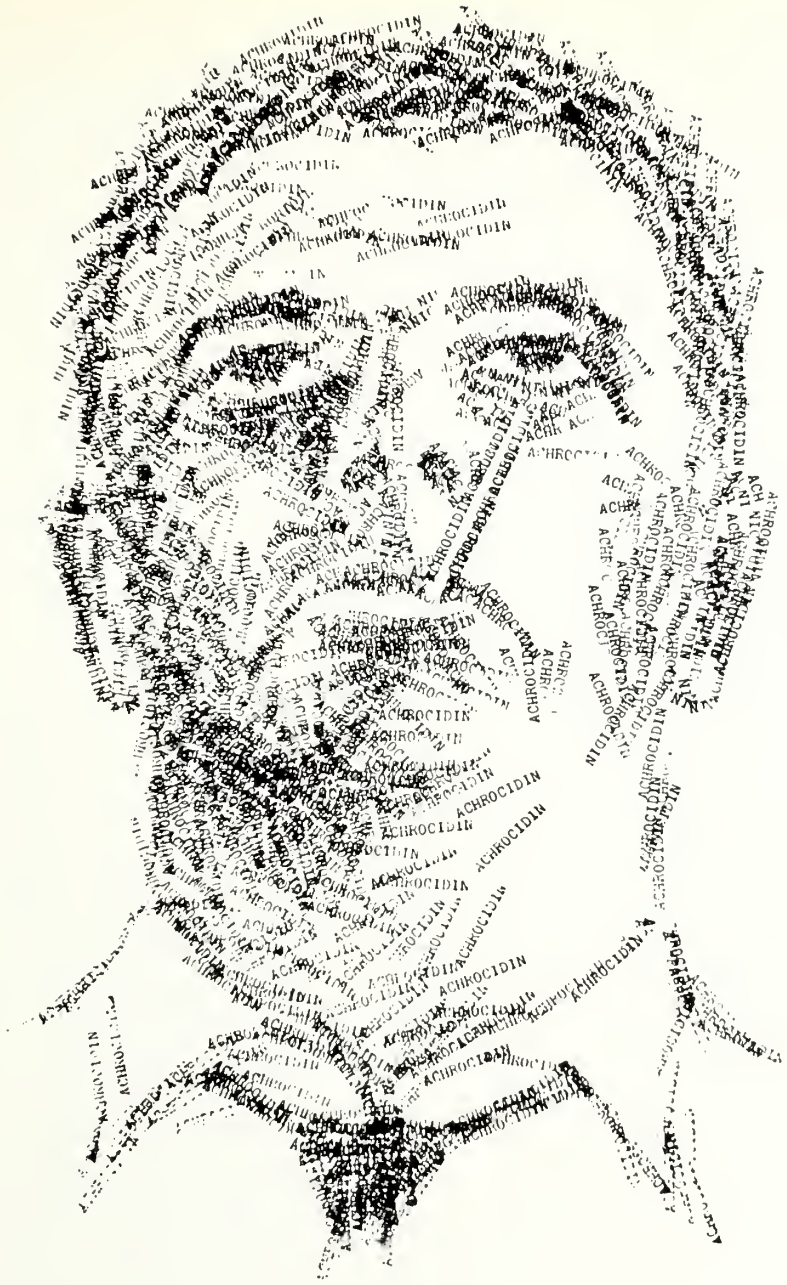
Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201



chrocidin® Tablets and Syrup

tracycline HCl—Antihistamine—Analgesic Compound

h tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

HROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the per respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly ients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to racycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

traindications: Hypersensitivity to any ponent.

ning: In renal impairment, since liver tox- is possible, lower doses are indicated; dur- prolonged therapy consider serum level rminations. Photodynamic reaction to sun- t may occur in hypersensitive persons. osensitive individuals should avoid expo- ; discontinue treatment if skin discomfort rs.

autions: Drowsiness, anorexia, slight gas- distress can occur. In excessive drowsi- consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

derle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

535-9

anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

for the patient ruled by anxiety

Librium® (chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley New Jersey 07110

JOURNAL of the Medical Association of the State of ALABAMA

DISPLAY SHELVES

FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
27 OCT 1970

IN THIS ISSUE

The Jerome Cochran Lecture, Development of Arterial Grafts and Arterial Surgery in Alabama . . . 239

On Coronary Occlusion and the Rationale of Treatment 245

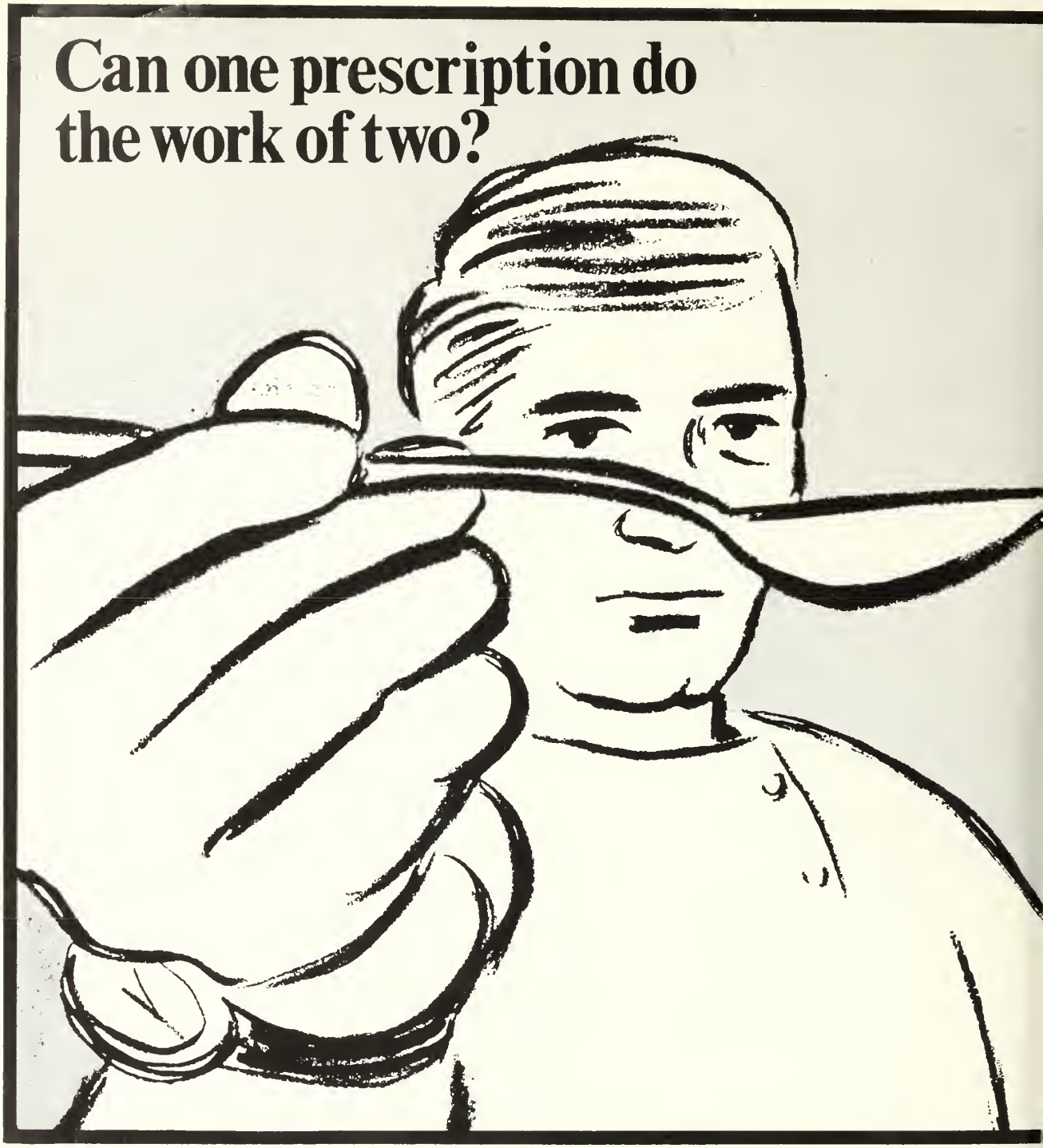
Emergencies 253

Medical Information Service Via Telephone (MIST) 257

Medical Office
Francis A. Countway Lib. of
Medicine
10 Shattuck St.
Boston, Massachusetts 02115

OCTOBER 1970

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

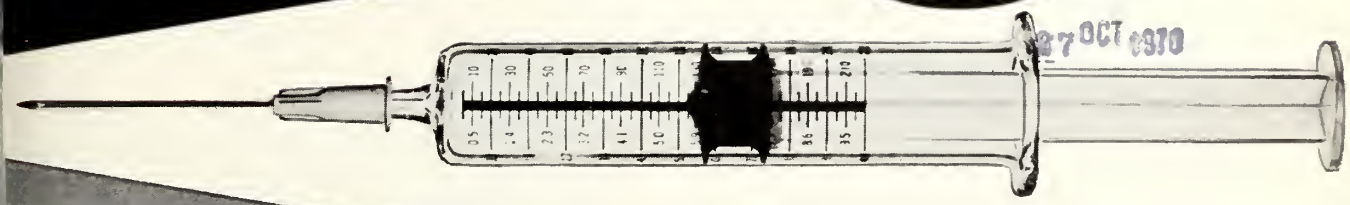
0-2102 (1832)

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
27 OCT 1970



BROMSULPHALEIN® IN A STERILE, DISPOSABLE, ECONOMICAL UNIT

The Bromsulphalein test is a convenient, sensitive, reliable test of liver function.

The precalibrated syringe contained in the BSP Disposable Unit makes weight calculations unnecessary, providing proper dosage regardless of patient-weight. Each unit contains complete directions for use, precautions and contraindications.

The all-inclusive BSP Disposable Unit provides economic unit dispensing.

Complete literature available on request.

HYNSON, WESTCOTT & DUNNING, INC.

H&WD

Baltimore, Maryland 21201

(BSP04)

JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • October, 1970 • No. 4

Office of Publication
19 So. Jackson St. — Montgomery, Ala. 36104
Subscription Price — $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. — Montgomery

Managing Editor
L. P. Patterson — Montgomery

Assistant Managing Editor
Mary Nell Williford — Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman — Montgomery
C. Kermit Pitt, M. D. — Decatur
H. H. Hutchinson, M. D. — Montgomery
William L. Smith, M. D. — Montgomery
L. P. Patterson — Montgomery

Officers of the Association

President
S. Buford Word, M. D. — Birmingham

President-Elect
A. E. Thomas, M. D. — Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. — Brewton
J. E. Cameron, M. D. — Alexander City
O. Emfinger, M. D. — Union Springs
Wood S. Herren, M. D. — Birmingham

Secretary-Treasurer
William L. Smith, M. D. — Montgomery

Executive Director
L. P. Patterson — Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. — Decatur
J. P. Collier, M. D. — Tuscaloosa
Paul W. Burleson, M. D. — Birmingham
L. L. Hill, M. D. — Montgomery
M. Vaun Adams, M. D. — Mobile
J. D. Bush, M. D. — Gadsden
E. L. Strandell, M. D. — Brewton
John W. Davis, Jr., M. D. — Montgomery
J. Garber Galbraith, M. D. — Birmingham
H. G. Hodo, M. D. — Fayette

State Health Officer
Ira L. Myers, M. D. — Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1970
Delegate—E. Bryce Robinson, Jr., M. D. — Fairfield
Alternate—W. E. White — Anniston

1971
Delegate—M. Vaun Adams, M. D. — Mobile
Alternate—E. L. McCafferty, Jr., M. D. — Mobile
Delegate—P. W. Burleson, M. D. — Birmingham
Alternate—Robert Parker, M. D. — Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. — Fairfield
Alternate—W. E. White — Anniston

CONTENTS

President's Page — 220

The Woman's Auxiliary — 225

Editcrial Comment — 226

When The "Cure" Can Be Worse Than The Disease — 226

Again The Problem Is In The Lap Of Medicine — 227

Guest Editorial—Surgery, John W. Donald, M. D. — 228

Flying Convenience for Calhoun Society Member — 229

Drs. Carter and Garlington, Two in 1971's 50-year Club — 232

Legal Page — 235

Respondeat Superior (Part II) — 235

Scientific Section — 239

The Jerome Cochran Lecture, Development Of Arterial Grafts And Arterial Surgery In Alabama, W. Sterling Edwards, III, M. D., Albuquerque, New Mexico — 239

On Coronary Occlusion And The Rationale Of Treatment, D. S. Tysinger, Jr., M. D., Dothan — 245

Occupational Health—As State Programs Face Up To It, W. H. Y. Smith, M. D., Montgomery — 244

Doctors Who Play With Fire (Their Favorite Recipes) — 250

Association Forum — 253

Emergencies, Eugene C. Sherlock, M. D., Birmingham — 253

Medical Information Service Via Telephone (MIST), Margaret S. Klapper, M. D., Birmingham — 257

Fathers and Sons in Medicine — 270

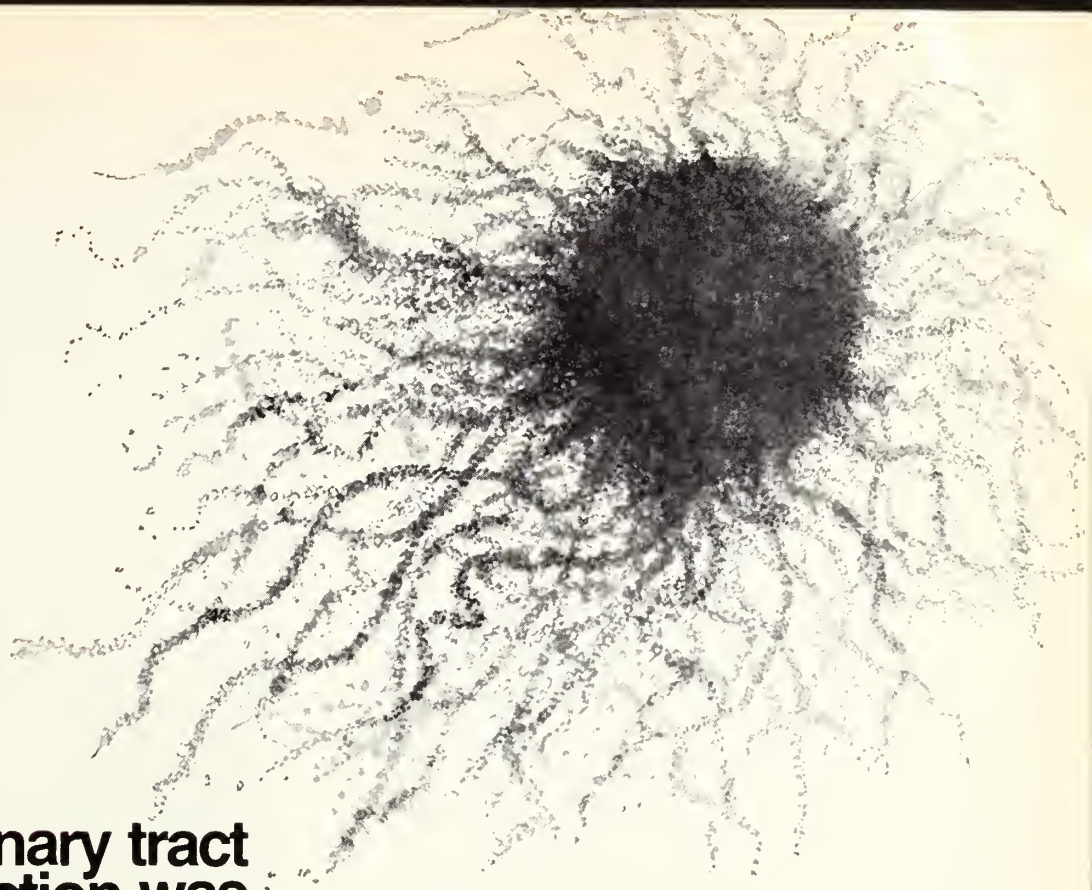
The Three Drs. Payne From Walker County — 270

The Month In Washington — 273

AMA To Hold Boston Convention — 278

Around the State — 280

Vital Statistics — 280



A urinary tract infection was eliminated last week

ntestinal monilial overgrowth has appeared this week

For women who are diabetic or debilitated, oral antibiotic therapy often sets the stage for monilial overgrowth in the intestine.

When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

It doesn't let monilia begin where bacteria end. Declostatin® 300

Demethylchlortetracycline HCl 300 mg and
Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN ® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 450-9

President's Page

S. Buford Word, M. D.

The Litigious Syndrome

The sharp continuous rise in premiums for professional liability insurance coverage has reached a crisis stage nationally and here in Alabama as well. There is no easy solution to this crisis. I am however of the firm opinion that so long as the insurance carriers set the premiums without consultation or negotiation that the premiums are likely to continue an upward trend.

I blame not the insurance carriers nor do I blame the lawyers who file these claims. I do feel the medical profession can do more to reverse the trend of higher and higher premiums, than can lawyers or insurance companies. This can be accomplished by an educational program which will over a period of time reduce claims, particularly nuisance type ones, and also those of negligence and misapplication of treatment.

Let's face it. We are living in a litigious age. It seems the litigious syndrome and the hirsute syndrome have appeared on the horizon simultaneously. Everyone is quick to sue now when the results are less than expected. Whether or not it is anyone's fault makes little difference. Sometimes we physicians generate a suit with our very haughty belligerent virtue. For instance, a lady wrote to me recently stating the physician of her husband should be disbarred from practice in Alabama. Her reason was, when she called the physician who had operated upon her husband asking if an EKG and other tests would be done prior to his discharge at noon that day, the physician's response was: "what the hell are you calling me again for, I don't have any dam time to talk to you every 2-3 hours and I'll go to the hospital and discharge him when I dam get ready to."

I do hope there were no complications subsequent to the operation performed. If the least complication develops this woman is in the frame of mind to avenge her wounded pride.

In my opinion something is out of joint. That is professional liability insurance coverage to compensate patients who claim their treatment resulted in injury or harm. In 1967 the Physicians of the United States paid 75 million dollars in premiums for this type of coverage. The 75 million was paid out in this manner; 30 million to insurance carriers and their attorneys for advice and investigations of claims, 15 million was paid out as brokerage fees and 30 million was paid out to the plaintiff patients and his attorney on a 50/50 basis. This means the patient that the system was developed to protect is getting only 20 cents out of each dollar premium paid.

This was three years ago and the premium rates have tripled and quadrupled since then,

but the percentages stay the same. I believe these premiums will continue to rise unless the members of this State Association band together and negotiate a premium rate with a carrier that will be fair and just. Further, members of this Association should institute an educational program that would result in fewer suits being filed. The physicians of this nation and this state are the individuals best qualified to settle this crisis.

Let's get busy.

Buford Word, M. D.
President

Taste!

Dicarbosil®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

painless intramuscular therapy for calcium deficiencies:

Calphosan®
calcium glycerophosphate, calcium lactate

To bring effective calcium therapy to the patient, Calphosan may be administered intramuscularly . . . without pain, inflammatory reactions, induration or sloughing. Injections twice weekly for a series of 5 to 10 injections are recommended.

Average dose per injection: One or two 10 ml. injections of Calphosan each week for the first four or five weeks, and on a when-needed basis thereafter.

Calphosan is a specially processed solution of calcium glycerophosphate and calcium lactate, containing 1% of each, in a physiological solution of sodium chloride. Each 10 ml. contains 50 mg. of calcium glycerophosphate, 50 mg. calcium lactate, with 0.25% phenol as preservative. Available in 10 ml. ampules in boxes of 10s and 100s; 60 ml. multiple-dose vials. Also available as Calphosan with B-12. U. S. Patent No. 2657172.

Contraindication: Hypercalcemia; neoplastic diseases; and fully digitalized patients. Do not use intramuscularly in infants and young children. Before starting therapy, consult complete product literature.

Write for free copy of "Calcium: The Ubiquitous and Essential Element" and for samples.

THE CARLTON CORP
Tenafly, New Jersey 07670

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select
Silain-Gel® Tablets:

when the patient prefers a liquid, select
Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide
one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

Drip stopped, Congestion cleared

For upper respiratory allergies and infections, up to 12 hours clear breathing on one tablet. Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely.

INDICATIONS: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, rhinitis, conjunctivitis, and otitis. CONTRAINDICATIONS: Hypersensitivity to antihistamines. Not recommended for use during pregnancy. PRECAUTIONS: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. SIDE EFFECTS: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. DOSAGE: 1 Extentab morning and evening. SUPPLIED: Bottles of 100 and 500.

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

Dimetapp® Extentabs

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

In September, it was my pleasure to visit the Auxiliaries of Blount, Cullman, and Houston counties. Each of these Auxiliaries accomplishes so much, and are quite enthusiastic about contributing their share toward the success of our State projects.

In Oneonta, I enjoyed congratulating Mrs. W. R. Sutton (Marlys) again on the outstanding recognition she received last spring. She was named the 1970 Woman of Achievement of the Alabama Federation of Business and Professional Women's Clubs!

The Southern Regional Workshop, sponsored by the Woman's Auxiliary to the American Medical Association, was held at the Roosevelt Hotel, New Orleans, on September 28-29. National officers and committee chairmen met with State Presidents, Presidents-Elect, and four State committee chairmen to discuss plans and programs for the coming year. Those from Alabama who attended along with me were: Mrs. Joan Chenault, member of the Board of Directors of AMPAC; Mrs. Gilder Wideman, Birmingham, President-Elect; Mrs. Ben Johnson, Bessemer, AMA-ERF chairman; Mrs. Haskell Pinkerton, Hanceville, Legislation chairman; Mrs. Eugene Bradley, Centre, Health Careers chairman; and Mrs. George Hansberry, Decatur, Northwest District Vice-President who substituted for Mrs. W. C. Browne, Vincent, Community Health and Children and Youth chairman.

The program was outstanding, particularly Dr. John Chenault's address. He attended as the AMA representative to the Workshop. The discussion groups were most interesting and stimulating. Belle Chenault had told us, "You are to be like sponges—absorb everything you hear; then go back and squeeze out all the information you gathered." We arrived back in Alabama late on September 29 saturated with new ideas, and "gobs" of information to pass on to the Auxiliary members, and Members-at-Large at the Fall Conference-Workshop in Montgomery on October 7-8. If the attendance is what we expect, our Auxiliary year will begin as the "Soaring and Successful 1970."

Mrs. Howard C. Johnson

Happiness is . . . setting goals and achieving them!

Camille Johnson

Camille Johnson

When The "Cure" Can Be Worse Than The Disease

The late Leslie Caplan, M. D., a Nazi POW in World War II, developed the thesis that all veterans who have been prisoners of war should receive service-connected disability.

In an editorial in Minnesota Medicine discussing Caplan, Reuben Berman, M. D., recalled a startling statistic that most Americans have forgotten:

"The World War II prisoner maintained morale in the face of overwhelming difficulties, exemplified by the experience of Leslie Caplan. (More particularly in the Bataan death march). The American prisoners in Korea, on the other hand, showed morale deterioration and lack of inspiration to escape, and died in shocking numbers. A group of Turks similarly incarcerated had *no* deaths . . .

"There is no doubt that the differences of American behavior in these two conflicts and the behavior of other groups such as the Turks will be the subject of study for years to come."

The control of pain has been from the beginning of medical history one of the great challenges to medical science. Ancient Hindu surgeons used anesthetics such as wine, henbane, and the fumes of burning hemp. The Romans developed various drugs for lulling the patients' senses. Opium, mandrake root, refrigeration of the body in snow—all have been tried.

But most of the anesthetics were as deadly as the pain itself. Narcotics had risks that no one realized. And many a doctor, wrote L. T. Woodward, M. D., in his "History of Surgery," published several years ago, "turned a patient into a drug addict in the process of sparing him pain."

A Narcotic, says the American Pocket Medical Dictionary, is "a drug which produces sleep or stupor."

We have busied ourselves, in our search for a 20th century Utopia, with relieving the public of the pain of responsibility. Could it be that we have administered a mental narcotic that has dulled the brain and drained away the determination of our American fighting men?

It is worth thinking about. And research in the area is particularly commended to the fields of pathology and psychiatry.

Again The Problem Is In The Lap Of Medicine

For a third time in less than two centuries, Alabama is being labeled "the murder capital of the country." First Man was the culprit, then the Mosquito, and now Man again.

The massacre at Fort Mims (where twice as many people died as lost their lives with Custer at Little Big Horn!) was the crest of Alabama's first push to the fore in homicides, to which tally must be added the uncounted hundreds who died at the Battle of Horseshoe Bend.

Then came the Mosquito, a fraction of whose victims may be tallied by the tottering tombstones crowding Alabama cemeteries and family burial plots. To the conspicuous yellow-fever casualty lists must be added the hosts of victims of the more subtle malaria.

The military, in the person of a future President of the United States, Andrew Jackson, ended the first season of slaughter.

And it was medicine, personified in the Alabamian, William Crawford Gorgas, M. D., that put a tentative period to the dual menace of the mosquito.

The U. S. crime report, released by the FBI in mid-August, reestablishes the State of Alabama at the top of the homicide heap, with a ratio of murders of 13.7 for each 100,000 persons.

Birmingham's violent-death record distances such cities as New York and Los Angeles, Cleveland and Chicago, New Orleans, Phoenix and Cincinnati, and it has four times the murder rate of Boston, Mass., and Buffalo, N. Y.

In crimes, Birmingham led all other Alabama cities with 11,843. Mobile was second with 8,104; with Huntsville third, 4,095; and Montgomery fourth, 3,765.

And for a second time, much of the hope of stemming the tide, reducing the record, and conquering the culprit rests with medicine. Circumstantial evidence convicts narcotics addiction. Medicine is the lone hope of reversing and negating a trend.

Alcohol and Laryngeal Cancer

There has been much less publicity about the connection between alcohol and cancer than there has been about smoking and cancer. I think the alcohol lobby must be even more effective than the tobacco lobby. . . .

[But statistics tell the tale.] Out of the several hundred people I have seen with cancer of the larynx, there were four non-smokers. Out of the several hundred people I have seen with cancer of the pharyngeal mucosa . . ., there were three non-alcoholics. A significant number of people who have carcinoma in the larynx are heavy drinkers and heavy smokers. Perhaps you think that alcohol doesn't get to the vocal cords when you swallow. Actually, not everything is blocked off at the false cord level. . . . Why do you think there is the so-called whisky voice? Why do you think people's voices are a little bit hoarse and raspy the morning after a big cocktail party—too much smoking, too much drinking, and too much talking loudly over the noise of the cocktail party. We feel that the drinking is an important part of it. . . .

You can't turn this around and say everybody who smokes and drinks is going to get cancer. The trouble is that you can't tell ahead of time whose mucosa is going to be sensitive to these things and whose isn't.

—Herbert H. Dedo, M. D., San Francisco

GUEST EDITORIAL

SURGERY

General Surgery is a most interesting and rewarding specialty. It requires long hours of hard work and considerable physical as well as mental stamina. During 21 years of private practice in General Surgery, a few basic principles have assumed greater importance. When asked to write a guest editorial on Surgery, I decided to briefly summarize these points which I feel should be emphasized in a surgical practice.

1. Preparation.

As in any other vocation, adequate preparation is of the greatest importance. A full surgical residency in an approved training program is essential. At this point, tribute should be paid those who are devoting their lives to a teaching career. The majority of surgeons are trained in institutions where full time men are involved in the teaching program and this is desirable. I also want to pay tribute to those surgeons in private practice who are involved in a voluntary, part time teaching program. This is most commendable and is as it should be, since physicians should always be teachers.

A young surgeon should be taught not only how to operate but when to operate. He should be taught that he should never operate if there is any other better way to treat the patient. The surgeon should be trained thoroughly so that he has confidence in himself. In my opinion, except during his training period under supervision, a surgeon should never undertake an elective operation unless he feels that he can do it as well or better than anyone else.

2. Compassion.

I have listed this second since I consider it to be of next importance to good preparation. This, of course, involves kindness, understanding, and a sympathetic feeling for others' distress. In this regard, the most often overlooked area is the patient's family. For example, when a surgeon finishes an operation, he has done at the moment all that can be done for the patient, but he still has an important task to perform. He should contact the family or friends as soon as possible to give a report on the patient. This should be done in person if at all possible. In the pre-operative period, time should be spent in explaining the illness and planned procedure to the patient and family. Frequent postoperative visits are necessary not only to check on essential laboratory and clinical findings but to reassure the patient and family. This requires time and patience but in my opinion, is part of good surgical care. I also believe that malpractice suits would be reduced to a minimum if all physicians showed true compassion.

3. Continuing Education and Teaching.

The surgeon must strive to continue his education and maintain an interest in teaching. The continuing education is done through reading the surgical literature, attending surgical meetings, conferences, postgraduate courses, etc. In the near future, the American College of Surgeons is planning to offer a self-assessment program to all its members. I hope that all surgeons will avail themselves of this opportunity to determine possible weaknesses. This should stimulate the surgeon to correct any weakness by continuing education. I have already mentioned the importance of teaching. Not only is teaching essential for the training of young surgeons, but a surgeon who is involved in teaching will automatically continue his own education. If a surgeon is not in an area where he can be involved in teaching medical students, interns, or residents, he can still teach, for there are always nurses and other paramedical person-

nel who are hungry for explanations and instruction.

4. Economics.

I have listed this last since it is of the least importance. A surgeon of course should be adequately remunerated for his work but this aspect of surgery should always be of secondary consideration. A surgeon should charge a fee which is fair and reasonable and it should be expected that this fee for his services would be paid. At the same time, part of a surgeon's practice should be to help care for the disadvantaged and the less fortunate in our society . . . This will occur automatically in the complete surgeon's life since he will be well trained, compassionate, and will maintain an interest in teaching and continuing education.

—John W. Donald, M. D.
Mobile, Alabama
President, Alabama Chapter
American College of Surgeons

Flying Convenience For Calhoun Society Member

Just a month before the German Kaiser fled his defeated country and left his Generals to arrange an armistice, a son was born to the Robert Clifton Simmons of Mobile. The date was Oct. 9, 1918. And being the eldest of six sons, he was given his father's name.

A few weeks ago, this son, now an M. D. practicing in Anniston and candidate for a seat in the State Legislature, flew into Dannelly Field, Montgomery, in his private plane. While his trip was politically motivated, it is as one of Alabama's growing group of flying physicians that he occupies this Journal position.

His first venture into the air as a student pilot was 14 years ago in San Antonio. His family then (as now) consisted of his wife, Ruth, his son Robert III, and his daughter, Ruth Elizabeth (then a baby in arms).

Shortly after this, the Air Force transferred him from San Antonio, Texas, to Anniston, Ala., where with his return to civilian life he elected to remain. For ten years after that initial venture into the air at the controls of a plane he had no time for the frills and thrills of flying.

Today, however, with his own plane, a single-engine Skylane Cessna, he has amassed some 200 hours solo. Without an instrument rating and with a lowering ceiling between

DR. SIMMONS, PILOT AND PLANE

Anniston and Montgomery, he brought a pilot with him, Charles Murray of Anniston.

"After all," Dr. Bob Simmons will tell you, "the only reason that doctors, lawyers, ministers, teachers and other professional people are considered a poor insurance risk, is that they don't fly enough to take cross-country trips."

Who's A Radical

What will it take to be classed as a radical 25 years from now? wonders Arnold Glasow.

If it keeps up, man will atrophy all his limbs but the push-button finger.—Frank Lloyd Wright.

When irritable colon feels like this

The blowfish, a small species of fish, reacts to stress or fright by puffing itself up with air. After about a dozen noisy gulps the belly is balloon-shaped and hard. When replaced in the water the air is quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

Drs. Carter and Garlington, Two in 1971's 50-Year Club

The distaff side is handsomely—and for the first time—represented in 1971's 50-Year Club of the Medical Association, in the person of Melson Barfield-Carter, M. D., the first female full professor at the University of Alabama Medical Center, the first chairman of that institution's Department of Radiology, and since 1965 the Center's professor emeritus of radiology.

Dr. Carter was born in Barfield, Ala., Jan. 18, 1895, graduated from Central Female College, Tuscaloosa, in 1911, taught school for three years, was graduated with a baccalaureate degree in mathematics from the University of Alabama in 1917, and four years later received her M. D. from Tulane.

She interned in Birmingham and in 1926 became the first woman ever to be accepted as a resident at Massachusetts General Hospital—accepted because her name gave no hint of her sex!

When the future M. D. approached the coach of the girls' basketball team at the University, saying she wanted "to try out for jumping center," he exclaimed: "You can't jump over a cigaret paper." She went from there to earn her letter as jumping center on the girls' basketball team. Tennis and swimming were other favorite recreations of her youth. She still belongs to a walking club and loves to dance.

No children were born of her marriage to the late Dr. Henry R. Carter, but Dr. Melson Barfield-Carter is proud of the fact that she has educated four foster children.

Of the nine living Alabama doctors qualifying for membership in the 1971 Fifty-Year Club, only one is distinguished by the fact that his name is rarely to be found in telephone directories over the state and nation—not at all in Montgomery, and once each in Birmingham, Huntsville, Mobile, and Chicago!

And as the Robert Bernard Garlingtons of Camp Hill have no children, this is the end of the line for this immediate wing of the family.

DR. CARTER

DR. GARLINGTON

Dr. Garlington was born on Tuesday, May 28, 1889, the son of Mary Ann (Trimble) and T. C. Garlington of Tallapoosa County. Educated in the local grade schools, he finished Southern Industrial Institute in 1909, and received his baccalaureate from Valparaiso (Ind.) University four years later.

For some years he taught school and farmed before entering the Medical School of the University of Alabama in Mobile, transferring later to Emory, Atlanta, from which he received his M. D. degree in 1921. Two years later, after interning at Birmingham Infirmary, he married Miss Fay McGinty of Camp Hill.

For a quarter of a century, Dr. Garlington was in general practice in Marion County and served several terms as president of that County Medical Society.

Then, when World War II became history, he returned to Camp Hill, in Tallapoosa County, where both he and Mrs. Garlington spent their childhood. He has been in general practice there since 1947.

Active in the Methodist Church, he was for 20 years a member of the Board of Stewards of his church in Marion, and is today an honorary member of the board of the church in Camp Hill. Hobbies, by the way, are fishing and hunting.

THE LEADING MANUFACTURER
OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

FREE CLINICAL SUPPLY

PLASTIPAK
INSULIN SYRINGE/NEEDLE UNITS

Send samples to:

Name _____
(Physician's Signature

Address _____

City _____ State _____ Zip _____

Clip out postcard on dotted line . . . no stamp required

Now you can lower the risk of insulin error when your patient is home . . . and alone

B-D

SINGLE-USE
PLASTIPAK
INSULIN SYRINGE/NEEDLE UNIT

8401
RED CAP u40

8406
GREEN CAP u80

as specific as insulin itself

Postage will be paid by Addressee

No postage stamp necessary if mailed in the United States

BUSINESS REPLY MAIL
First Class Permit No. 134, Fairview, N.J.

Becton-Dickinson and Company
Consumer Products Division
P.O. Box 183
Fairview, New Jersey 07022

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

Clip coupon on dotted line . . . fill out other side
send for physician's free samples

color-coded caps and numbers—red for U40, green for U80

presterilized—consistently dependable, and sterility is assured until cap is opened

easy-to-hold, easy-to-handle—even for child diabetics with small hands or adults with stiff fingers

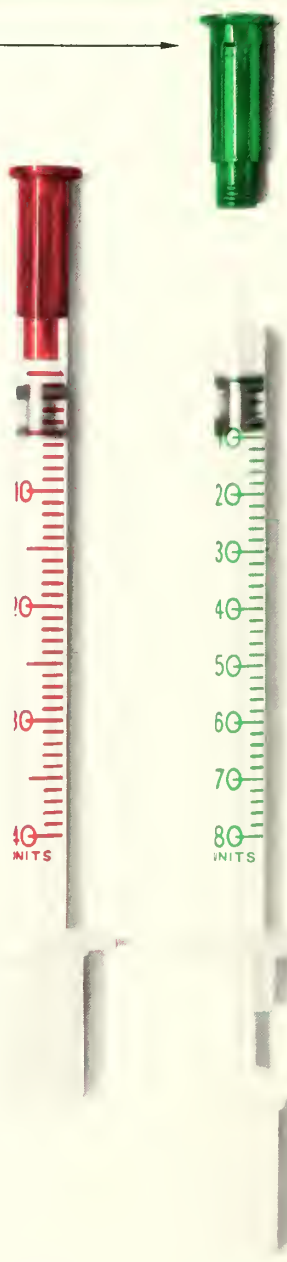
the sharpest needle your patient can buy—far sharper than any reusable needle

pocket-or-purse portable—sturdy from tip to top

integral cannula reduces air bubbles

single-scale PLASTIPAK insulin syringe needle units eliminate the hazard of reading the wrong scale

the first insulin syringe so low in cost your patient can use a new one every time



its single-scale—U40 or U80—minimizes the risk of measurement errors. Your patient *can't* read the wrong scale.

low cost—barely pennies higher than old-fashioned disposable needles without syringe . . . about as low as a cup of coffee

big numbers, wide spaces for easy reading

Supplied: in packages of 10—PLASTIPAK syringe U-40 (red) or PLASTIPAK syringe U-80 (green) Prescription required in most states.

U40 **U80**

BECTON B-D
DICKINSON
Consumer Products Division
Becton, Dickinson and Company
Rutherford, New Jersey 07070

) and PLASTIPAK are trademarks

Printed in

Legal Page:

Respondeat Superior (Part II)

Douglas Evans, J. D.
Director, Legal Legislative Affairs

Recent cases in which the courts considered the issue of Respondeat Superior.

Hospital Not Liable For Negligence Of Staff Physician

A physician on a hospital staff was held to be an independent practitioner, not an employee, and the hospital was not liable for his negligence. This finding and other involving expert testimony and standards of hospital care were made by the Supreme Court of Iowa in a case where a jury returned a verdict against a patient who claimed negligent diagnosis and treatment. The dismissal of the hospital was affirmed, but the judgment in favor of the physician was reversed.

The patient, injured in an automobile accident, was taken immediately to the county hospital. The attending physician ordered X-rays of the dorsal spine, chest, right elbow, and lumbar spine. He diagnosed the injuries as "laceration of the chest, rib fracture, compression fracture of the spine of the 8th, 10th and 11th dorsal vertebrae, and a cerebral concussion."

The patient was discharged in about two weeks. After continuing to experience numbness and pain of the left arm and mid-back, the patient went to his family physician, who ordered additional X-rays. He found "a fracture dislocation of the fifth cervical vertebra over the sixth cervical vertebra." A cervical collar was applied and the patient was transferred to a hospital at Rochester, Minnesota, where surgery was performed to reduce the fracture and fuse the cervical vertebrae. Some permanent disability in the left arm and hand remained.

The claim against the physician was that he was negligent in not diagnosing the injuries to the fifth and sixth cervical vertebrae. The hospital was charged with substandard care, and it was alleged that the X-rays taken by the staff radiologist were inadequate and were improperly interpreted.

The radiologist was not made a party to the suit. He was an "*independent contractor,*" the court said, and any negligence on his part could not be imputed to the hospital. As to the allegation of improper care, the court agreed that the instruction to the jury was outmoded, in that it applied only the standard care customarily exercised by hospitals in the community. The more modern standard is that exercised by hospitals in similar locations under similar circumstances. No harm was done however, the court said, as the patient failed to introduce any evidence at all of any standard of care, so that no finding could be made.

As to the claim against the examining physician the patient's expert witness, a radiologist, testified that the X-ray showed an abnormality at the "C-5 C-6 level," and that: "The joint space appears wider than it should. The articulars or steps are disorganized or at least they are not sharply defined and clean." He said further: "I would certainly on the basis of what I saw here have recommended that further examination of the cervical spine be conducted simply because I would want to clarify in my own mind what this meant."

On cross-examination the attorney insisted on a "yes" or "no" answer to the question "do you see any fracture at the level of C-5 or C-6 in that X-ray?" On refusal to say yes or no, but only that the abnormality which he saw in the X-ray required clarification the trial judge rejected his testimony as "speculative and not a definite opinion."

The appeals court disagreed, and inasmuch as the issue "was the very heart of the law

suit," ordered that the case against the physician be sent back for a new trial.

Liability For Missing Sponges

Two cases illustrating the problem of sponges inadvertently left in the patient after surgery were discussed in an article, in a hospital association journal.

In the first case, a surgeon was held liable because he had failed to note the 12-inch long metal spongeholder, either attached to the sponge or separated from it. The court of appeals in this Louisiana case held that his failure was his own negligence, as distinguished from the nurses' counting error, thus holding the surgeon, as well as the hospital liable. The lower court, from which this appeal was taken, held that the nurses were not servants of the surgeon; they were under his control during surgery, but not for the purpose of making a sponge count, which was considered part of the hospital's procedure, so that the surgeon was not bound by the failure of the nurses to account for all sponges.

The second case, decided in Texas, held to the traditional "captain of the ship" doctrine, holding the surgeon liable for those in the operating room working under his control. This included the nurses who miscounted. It should be noted that, when this suit was filed, nonprofit hospitals in Texas were not liable for the negligence of their personnel if chosen with reasonable care. Therefore, the patient, in order to recover any damages, had to bring suit against the surgeon.

Assigned Staff Physician Not Agent Of Hospital

Assignment of a member of its medical staff to an accident victim does not make the hospital liable for the malpractice of the physician. The Delaware appeals court ruled that on the facts, he was not the real or apparent agent of the hospital. The court dismissed the hospital from the suit.

The patient, a minor, fell while being chased by a bee, twisting her ankle. The family physician could not be located, and she was taken to the hospital. When the mother was asked if she wanted any specific physician, she replied that "any doctor would be all right." The practice at the hospital was limited to the medical staff. Active members could vote or hold office, but were not salaried. Under the rules, "in the case of a pay patient applying for admission who (had) no attending physician, he (was) assigned to the members of the active medical staff on service on rotation."

The assigned physician had X-rays taken and applied a cast to the patient's left leg. The complaint stated that the cast was put on too tightly, and as a result of failure to properly diagnose and treat the resulting condition, the child suffered injury to the "vascular, lymph, cellular and nervous tissues and cells of her leg." Suit was filed against both the physician and the hospital.

In considering the hospital's motion to be discharged on the facts as alleged, the court distinguished between two "clear" situations. A physician selected by the patient, even though a staff member, is regarded as an "independent contractor," and the hospital is not liable for his negligence. Where, however, the physician is an intern or a resident, is paid a salary, and works under the direction of the hospital's staff, he is regarded as the servant or agent of the hospital. In this situation the hospital would be liable.

The patient here argued that the hospital held itself out as providing medical care and that, regardless of actual authority, it should be held liable under the "apparent authority" doctrine. The physician's presence in the emergency room and his assumption of care should be considered the acts of the hospital.

The court pointed out that the rules provided for referral service for pay patients only where there was no attending physician and that payment for the medical services (by Blue Cross) was made to the physician not the hospital. The facts as alleged did not establish that the hospital held itself out as a "provider of physician care."

relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN
ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
PINT (473 cc.) M-148
Lilly
ILOSONE® LIQUID
ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P.
125
SHAKE WELL BEFORE USING
REFRIGERATE
AVOID FREEZING
PINT (473 cc.) M-153
Lilly
ILOSONE® LIQUID
ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P.
250
SHAKE WELL BEFORE USING
REFRIGERATE
AVOID FREEZING
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
30 TABLETS No. 1834
Lilly
ILOSONE® CHEWABLE
ERYTHROMYCIN ESTOLATE
125 mg.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
100 PULVULES® No. 375
Lilly
ILOSONE®
ERYTHROMYCIN ESTOLATE CAPSULES, N.F.
250 mg.
100 PULVULES® No. 374
Lilly
ILOSONE®
ERYTHROMYCIN ESTOLATE CAPSULES, N.F.
125 mg.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

THE JOURNAL
of
THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
Published Under the Auspices of the Board of Censors

Volume 40 October, 1970 Number 4

Jerome Cochran Lecture Development Of Arterial Grafts And Arterial Surgery In Alabama

W. Sterling Edwards, III, M. D.

It is indeed one of my proudest moments to be asked to deliver this address honoring Doctor Jerome Cochran who organized our Public Health System as well as our State Medical Association. I would like to share with you the events and people involved in the development of synthetic arterial grafts and arterial surgery over the past 18 years, some of which occurred here in Alabama.

In the late 1940's, Dr. Robert Gross in Boston[1] first successfully used human arterial grafts in several children with coarctation of the aorta. DuBost in Paris in 1951[2] first replaced an abdominal aortic aneurysm with a human graft and the field of arterial surgery began in earnest. Different methods of preservation and sterilization of homografts were tested. It soon became difficult to obtain enough human arteries since it was found desirable to procure grafts only from autopsies on young individuals who had not died from a malignancy or from infection. Even more discouraging was the development of a significant number of aneurysms of the graft, and of frequent calcification and thrombosis in these human arteries.

This led to a search for arterial substitutes that were more readily available and more durable and inert. In April 1954, Drs. Arther Blakemore and Voorhees[3] gave a paper at the American Surgical Association in Cleveland in which they described the use of synthetic cloth tubes as experimental and clinical artificial arteries. They found that blood came through the pores of the tube rather vigorously at first but after a short time the pores became sealed with fibrin and platelets and there was no further blood loss. Because woven cloth frays badly at cut ends, it will not hold sutures well and cuffs were turned at both ends to avoid this. To make a cloth tube (Fig. 1), the material was folded and sewed making a longitudinal seam. In clinical practice, Drs. Blakemore and Voor-

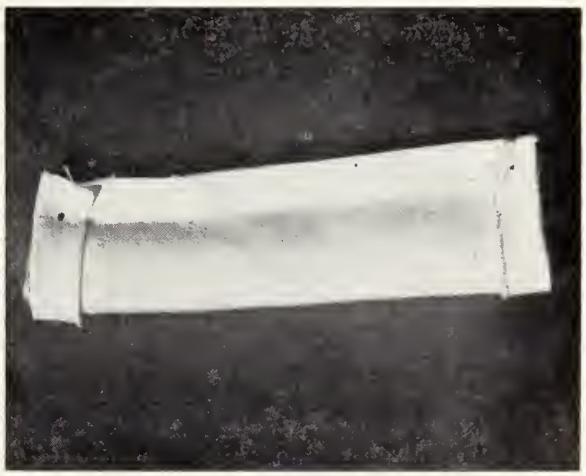


Figure 1. Method of tailoring an artificial artery of cloth as described by Blakemore and Voorhees.

The Jerome Cochran Lecture was delivered at the 109th Annual Session of the Medical Association of the State of Alabama in Mobile.

Dr. Edwards is Professor of Surgery, University of New Mexico Medical School, Albuquerque, New Mexico.

hees described opening the abdomen of a patient and measuring the outside diameter of the aorta above and below an aneurysm and the length of graft required. They called these figures to a technician who quickly constructed a graft on a sewing machine. The graft was autoclaved and inserted.

It had been my arduous task at the University Hospital to obtain the arterial homografts from autopsies at all hours of the day and night so I welcomed the thought of a more readily available source of arteries. I came back from Cleveland, collected several worn out nylon slips from my wife, and began to practice the technique that I had heard described. It soon became apparent that grafts thus constructed had several disadvantages, the cuffs and seams of the graft were quite clumsy to work with, most available cloth was too porous and serious hemorrhage occurred when flow was first restored through the graft. The worst problem was the kinking of the tube unless it was inserted with just the right amount of tension. As I was working away in the animal laboratory on this project in June 1954, I was called to see a patient of Dr. Tinsley Harrison's. Mr. Pat Moore, the patient, proved to have severe aortic valvular insufficiency. He was an electrical engineer from Decatur where he was employed by the Chemstrand Corporation, a new textile manufacturing plant with a large textile research laboratory. With his engineering background, he had read all he could find about surgery for leaking aortic valves and we talked at length about this problem. The Hufnagel ball valve which could only be inserted in the descending thoracic aorta was the only valve substitute then available. Several patients in whom we had used this prosthetic valve had not benefitted significantly, so we did not recommend it to Mr. Moore. He was told that we were working on artificial heart valves in the laboratory as were many others, and that perhaps in the very near future a much better one would be available. I described our work and our problems in artificial arteries of cloth, and he became quite interested. He felt certain that the textile scientists in Chemstrand could be of much help in this project. When Mr. Moore was discharged from the hospital, he went immediately to his superiors at Chemstrand and convinced them that they should lend us a hand. Unfortunately Mr. Moore died a year later, seven years before the first successful aortic valve insertion, so that he was denied the opportunity to see the fruits of his efforts in bringing his Company into the graft project.

Dr. James Tapp, a physical chemist, was assigned to work with us. We decided to attack the project by trying to accomplish each of the following objectives.

1. Eliminate the longitudinal seam.
2. Eliminate the necessity for cuffs on the ends to prevent fraying.
3. Regulate the porosity of the cloth to prevent hemorrhage.
4. Develop a way to prevent kinking of the graft at points of flexion.
5. Develop grafts with prefabricated bifurcations and branches.

Dr. Tapp was able to solve the first three problems simultaneously (Fig. 2). The longitudinal seam was eliminated by braiding a nylon cloth tube on an old shoelace machine. I had never realized that a shoelace was a tube before. This tube was then threaded on a glass rod and dipped in a weak solution of formic acid. Tapp knew that formic acid was a solvent of nylon, but that a very weak con-

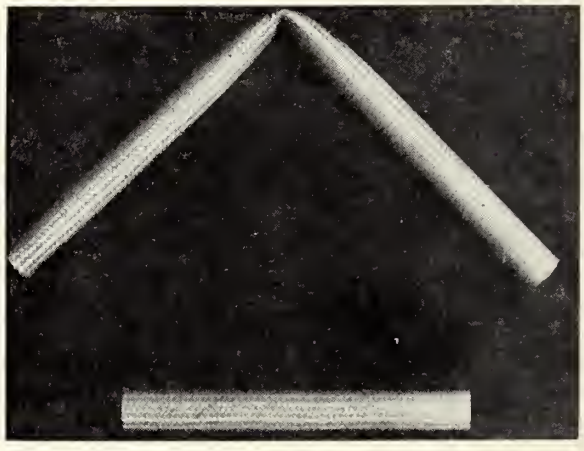


Figure 2. Braided nylon tube showing its tendency to kink on flexion.

centration would dissolve only the outer layer of each fiber and allow it to become adherent to adjacent fibers. In this way the porosity could be reduced to a controlled degree, and fraying of the tube at its cut ends could be greatly reduced. The major portion of the summer of 1954 was spent trying to develop a method of preventing kinking of the tube. Thick and thin tubes, different concentrations of formic acid, and many other modifications failed to produce a tube that would not kink. We finally stumbled on the solution by accident.[4] Tapp was pushing the cloth tube off the glass rod one day when it assumed a corrugated shape and dried in this configuration. He suddenly remembered that this crimping process had been used for years to prevent kinking in vacuum cleaner's tubing and anesthesia tubing (Fig. 3). He sent

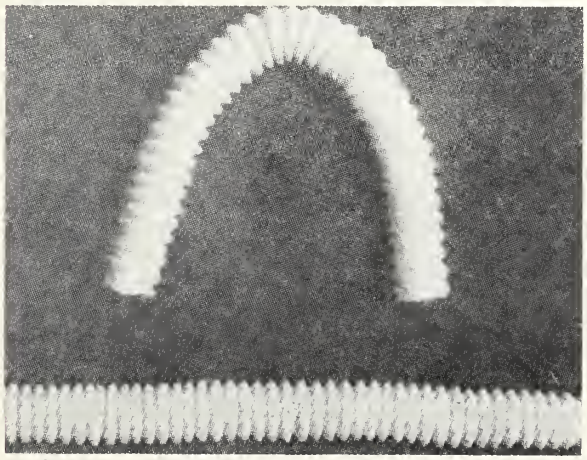


Figure 3. Crimped tube of braided nylon which flexes without kinking.

one of these to Birmingham for testing. I was not optimistic about success, since all researchers at that time were convinced that the inside lining of an artificial artery must be extremely smooth, and the lining of this crimped tube was obviously uneven. Nevertheless, a number of crimped tubes were used to replace the abdominal aorta of dogs, and much to my surprise, they remained patent. Animals sacrificed several weeks after implantation were found to have developed a smooth lining which leveled out the irregularities. Microscopic sections of this lining showed it to be composed of fibrin and platelets with a unicellular inner layer of fibroblastic cells producing a pseudo-intima.

In September 1954, we had an opportunity to use the crimped braided nylon tube for the first time in a patient who had a gun shot wound of his common femoral artery in the groin and for whom a homograft artery proper size was not available. The tube functioned well and the patient could acutely flex his thigh at the hip and maintain good pulses in his foot. We then began to use the grafts electively as a by-pass around chronically obstructed femoral arteries, and again this proved successful. The graft could be inserted through two small incisions in the leg above and below the obstruction[5], and sutured end to side to the patent artery without interfering with existing collaterals (Fig. 5).

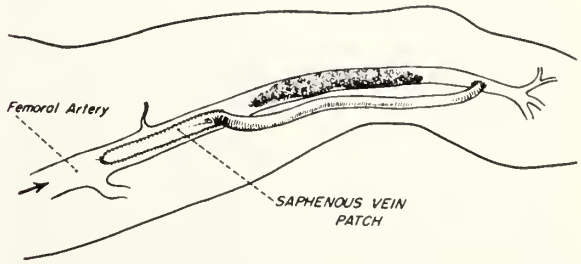


Figure 5. Synthetic by-pass graft technique for femoral artery occlusion.

A major problem still existed, and that was the development of tubular bifurcations and branches. Contact was made with many major textile manufacturers to find a machine that would fabricate a Y tube, but there was no such machine available. I discussed the problem one day with Mr. Ruel Donaldson of Talladega, owner of a steel mill and the first patient in whom I had inserted a homograft bifurcation for chronic arteriosclerotic obstruction. A few weeks later, I received from him through the mail a crude knitted Y tube that he had had made by the U. S. Catheter and Instrument Company of Glen Falls, New York. Mr. Donaldson somehow knew that this Company had facilities for constructing small cloth tubes of varying shapes and with branches for use as ureteral and cardiac catheters. This was the beginning of our association with U. S. Catheter, and its imaginative President, Mr. Norman Jeckel, who helped in many further refinements of

arterial grafts.[6] This Company now manufactures over 90 per cent of the arterial grafts in use. A special knitting machine was designed to make bifurcation grafts (Fig. 4), but it was found by clinical experience that right angle branches such as those to the kidney were best sutured to the side of the aortic graft at the operating table since there were innumerable variations in location of these branches.

Nylon was selected as the thread of choice because of its great tensile strength and mechanical durability as indicated by its use as automobile tire cord. Animal experiments

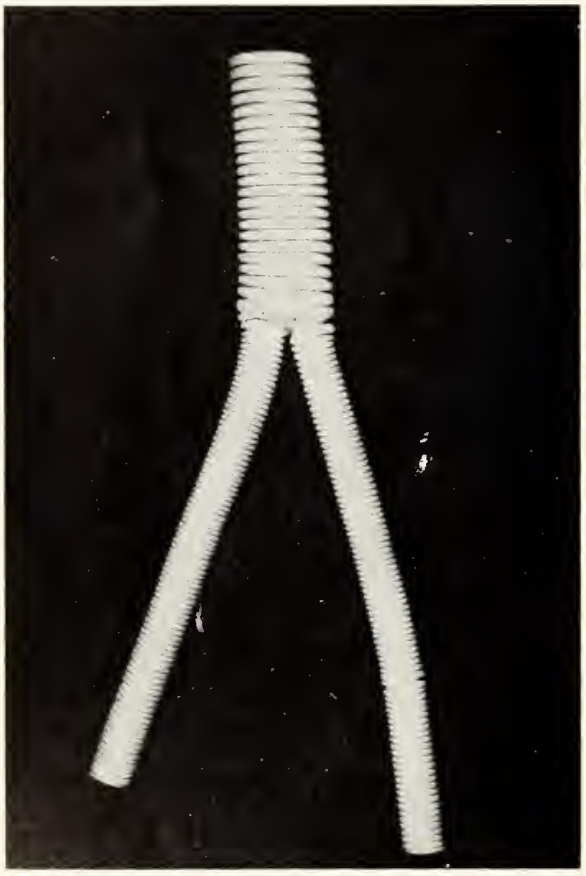


Figure 4. Teflon bifurcation graft.

by Harrison of Atlanta, and others showed that nylon lost about 85 per cent of its tensile strength in 100 days after implantation in animals while dacron lost only 0.1 per cent and Teflon lost none. We decided that Teflon, with absolutely no chemical reaction in the human body, would be a much safer material than nylon and with the help of Mr. Jeckel a process of crimping Teflon was developed.[7] There was also need for a graft with very low porosity to be used in the thoracic aorta where pressure is high and where the graft must often be inserted with the patient fully heparinized using some form of extra-corporeal circulation. A tightly woven graft with very tiny pores solved this problem very nicely.

After several years of enthusiastic use of crimped tubes to by-pass femoral-popliteal obstructions in over 100 patients, a disturbingly high incidence of late occlusions of the grafts began to appear. Patients who had functioning grafts a year or more after insertion were studied by femoral arteriography, first with the leg straight, then with the leg flexed, since by history, many patients developed acute occlusion of the graft during squatting or sitting with the legs tucked under them. These studies were quite revealing; the grafts were widely patent when the legs were straight, but became quite tortuous and kinked especially across joints after flexion of the hip and knee. This was found to be due to loss of flexibility of the crimped tube as it became encased in scar tissue in the patient's leg. This led us to conclude that synthetic tube grafts were not the ideal method for reconstructing chronically obstructed leg arteries.[8] Cloth tubes have proved very satisfactory for replacement of large arteries in the thorax and abdomen where flexion is not a problem. The principal indication for grafts at the moment is the replacement of the abdominal aorta for aneurysm.

After becoming discouraged with the use of synthetic grafts in the leg in 1958, we tried semi-closed endarterectomy, the method of removing the diseased intima with loops, but the early and late occlusion rate was too high. We had better results with a completely open technique of endarterectomy carefully cleaning out the intima and suturing the long incision in the artery. A number of these patients returned in one or two years with recurrence of claudication. Repeat arteriograms showed re-stenosis of the en-

darterectomized segment. Our experience during this same period with aorto-iliac endarterectomy had been much more successful with long term patency of these segments. Perhaps the femoral and popliteal arteries would stay open better if the lumen could be made larger, preferably with autogenous tissue. This led to the development of saphenous vein patch reconstruction after open endarterectomy (Fig. 6).[9] Again, initial results were excellent, but after two years the occlusion rate was about 25 per cent. Follow-up arteriograms demonstrated that in those patients with large saphenous veins used as a patch, the resulting lumen was so large that there was stagnant flow, fibrin was laid down along the walls as in an aneurysm. The technique was, therefore, modified by suturing the patch in place over an 18 Fr. catheter stent so that the lumen would be only slightly larger than normal, and results improved, but this was still a tedious and time consuming operation.

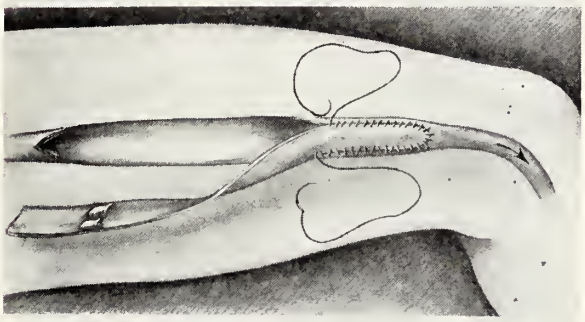


Figure 6. Method of venous patch graft reconstruction after open endarterectomy.

Other workers in the vascular field were using the saphenous vein as a by-pass graft with considerable success so we gave it a try. This has proved in the past decade to be by far the best method of long term restoration of flow in chronic obstructions of the femoral, popliteal, and even the tibial arteries. In an occasional patient, however, the saphenous vein branches in mid thigh and each branch is too small to be used as a by-pass graft. In this situation, we found it possible to use the larger part of the vein to by-pass as much of the obstruction as possible, and then split the smaller portion to use as a patch to reconstruct the rest of the artery after open endarterectomy (Fig. 7).[10] For eight years, we have successfully used autogenous saphenous vein either as a by-pass graft or as a patch—or in combination and 90 per cent of these reconstructions remain open indefinitely.

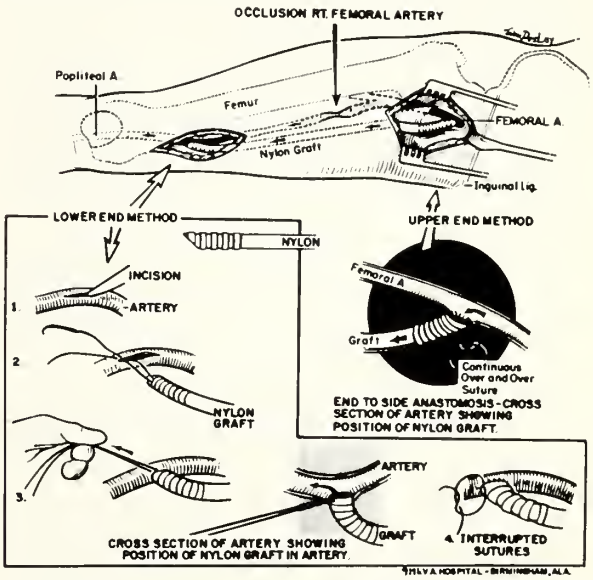


Figure 7. A combination of vein by-pass graft and vein patch reconstruction is used if part of the saphenous vein is small.

I would like to take this opportunity to express my gratitude to Alabama, my native State, for the support of its private citizens, its many physicians, my friends, its industries, and its University Medical Center for supporting me and my research and clinical work over the years. It was a very difficult decision for me to make to transfer my activities elsewhere, for I shall always look upon Alabama as home.

References

1. Gross, R. E., Hurwitt, E. S., Bill, A. H. and Pierce, E. C.: Preliminary Observations on the Use of Human Arterial Grafts in the Treatment of Certain Cardiovascular Defects. N. E. Jour. Med. 239:578, 1949.

2. DuBost, C., Allary, M. and Oeconomos, N.: A Propos du Traitment des Aneurysms de L'aorte. Mem. Acad. Chir. Paris 77:381, 1951.

3. Blakemore, A. H. and Voorhees, A. B., Jr.: The Use of Tubes Constructed of Vinyon "N" Cloth

in Bridging Arterial Defects—Experimental and Clinical. Ann. Surg. 140:324, 1954.

4. Edwards, W. S. and Tapp, J. S.: Chemically Treated Nylon Tubes as Arterial Grafts. Surgery 38:61, 1955.

5. Edwards, W. S. and Tapp, J. S.: Peripheral Artery Replacement with Chemically Treated Nylon Tubes. Surg. Gynec. & Obst. 103:499, 1956.

6. Edwards, W. S. and Tapp, J. S.: A Flexible Aortic Bifurcation Graft of Chemically Treated Nylon. Surgery 41:723, 1957.

7. Edwards, W. S.: Progress in Synthetic Graft Development—An Improved Crimped Graft of Teflon. Surgery 45:298, 1959.

8. Edwards, W. S.: Late Occlusion of Femoral and Popliteal Fabric Arterial Grafts. Surg. Gynec. & Obst. 110:714, 1960.

9. Edwards, W. S.: Composite Reconstruction of the Femoral Artery with Saphenous Vein after Endarterectomy. Surg. Gynec. & Obst. 111:651, 1960.

10. Edwards, W. S.: A Technique of Femoropopliteal Arterial Reconstruction. Surgery 58:469, 1965.

Occupational Health—As State Programs Face Up To It

By W. H. Y. Smith, M. D.

On Sept. 28, 1970, the 30th Annual A. M. A. Congress on "Occupational Health" was held in Los Angeles. Immediately prior to this Congress, a Council Advisory Conference from the A. M. A. with State and County Chairmen was to be held.

At the present time there are 18 States and Puerto Rica, Washington, D. C., and two Counties which have a variety of programs on Occupational Health. It is the purpose of this article to summarize their activities and to suggest, if possible, a beginning of such a program in Alabama.

Since, primarily, it belongs and pertains to doctors, it is necessary to have an Occupational Health Committee of physicians appointed by the Medical Association of the State of Alabama and officially licensed by law. This Committee would have power to license local Occupational Health Committees and to co-ordinate all other groups related or quasi-related to Industrial Health, such as industry, the bar, organized labor, etc. It would set standards for all groups and perhaps, set fee schedule scales for physicians, including specialists. This is probably a key point and very necessary part for co-ordinated operations. It would set standards of operation for clinics and be responsible for standing orders for nurses especially when a physician is not available or in attendance.

In the States, District, and Counties with a program, there are certain health standards in each one to which the primary concentration and consideration is given. The District of Columbia has a major project which is concerned with a rather detailed examination of food handlers such as a physical examination with all clothes removed, S. T. S., tuberculin tests and X-ray if needed, and toilet facilities with special reference that food handlers' clothing should not be left in wash rooms or toilets. Georgia is concerned with health and safety of employees. Iowa's concern is the handicapped. Minnesota concerns itself with the handicapped and periodic audiometry. Missouri has industrial medicine as its primary interest. Other States have water, air, and noise pollution as their first problems and some have interest in Workmen's compensation.

All in all, an "Occupational Health Committee" seems worthwhile for Alabama and it must be conceded that progress will be slow. But until a medical Committee is appointed and empowered nothing much will be done.

On Coronary Occlusion And The Rationale Of Treatment

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

The American Association for Inhalation Therapy has included Electrocardiology and Coronary Care Unit and Intensive Care Unit monitoring in the training program for therapists and technicians. This is an introduction to coronary artery occlusion and the rationale of the approach of treatment.

Most heart attacks are secondary to arteriosclerotic disease of the coronary arteries. The blood supply to the heart consists of the right and left coronary arteries. The right coronary supplies predominantly the right ventricle and, in about 48 per cent of individuals, also the interventricular septum and posterior and diaphragmatic portion of the myocardium. The left coronary artery divides into two branches. One, the anterior descending branch, supplies the anterior and lateral portion of the left ventricle and the left posterior descending that supplies the lateral and most posterior portions. In about 14 per cent of cases, this is the sole artery that supplies the interventricular septum. In the remainder the septum is supplied to a certain extent by both arteries.

These are major arteries. The blood supply to the arteries is the vasa vasorum, and is derived from the surrounding area and comes from outside the artery into the muscle layers and on into the media. As atheromatous plaques develop in the vessel in the subintimal layers, a blood supply develops from the lumen of the artery into the plaque and, unlike the remainder of the artery, the plaque then is supplied from the lumen of the vessel itself. In periods of high work, spasms, or any other situation in which there is a rapid flow, there is a decrease in the lateral pressure and poor perfusion of this group of vessels that go to the plaques. This area becomes ischemic and, as ischemia develops, then hemorrhage begins within the plaque and dissects to the surface. At this point the plaque can rupture sending fragments down the artery to the more distal, smaller radicals or a thrombus can form at the site of the plaque on its surface and thereby close off the artery. Thus, there develops coronary thrombosis, and coronary occlusion. The muscular tissue beyond the occlusion dies and this is a myocardial infarction. This area of infarction consists of three zones. The central portion where death of tissue cells occurs is surrounded by a zone of injury in which collateral blood supply may or may not be sufficient to keep tissue alive and return it to normal muscle tissue. Outside this is a zone of ischemia due to swelling and poor circulation from the collateral circulation. Beyond this the myocardium is normal.

The heart is a muscle. The left ventricle is more like a round container with a thick muscular wall which contracts from the apex up in a constricting nature forcing blood out. The right ventricle is more like a purse or bellows having a much thinner wall and, instead of closing by constriction, it collapses against the septum and left ventricle to push blood out. The left ventricle is much better prepared to take on increases in strain than is the right ventricle. The zones of the infarct in which the muscle injury and dead muscle exist do not contract and the zone of ischemia contracts very poorly. These areas, as a rule, may be extensive, including all but the inner surface of the myocardium. This is called a through-and-through infarct or transmural infarct. It may be one of the smaller radicals down within the structure of the myocardium that is involved. This is known as subendocardial infarction. The reason the innermost layer of the myo-

cardium rarely is involved in an infarct is because it is supplied from the lumen of the ventricle which protects it from poor blood supply. In a through-and-through infarct this area of myocardium does not contract as the heart beats and in fact, depending on size and situation, may paradoxically balloon out to a varying extent with each cardiac contraction, thus making the ventricular contraction inefficient, reducing effective cardiac output. Also from these areas, as ischemia, etc., develops, the myocardium becomes irritable giving rise to arrhythmias. Thus we can have either arrhythmias, or cardiac insufficiency with shock.

There are several syndromes associated with heart attacks that should be discussed. The first is the situation in which the right coronary artery supplies the posterior and diaphragmatic surface and septum and when there is a posterior infarct. In this individual there is frequently infarction of part of the right ventricle. Since the right ventricle cannot handle insufficiency to the extent that the left can, then there develops a rather marked insufficiency with increase in the central venous pressure, a reduction in blood flow from the right heart through the lungs to the left heart with a reduced cardiac output and the picture of cardiogenic shock with confusion, delirium, pallor, clamminess, profuse sweating, etc., and low to no blood pressure. This syndrome is susceptible to pressor and cardiotonic agents and repeated transfusions to two to three hundred ccs. of five per cent dextrose in water rapidly. It will be noted that during these times the lungs are dry. As the rapid infusion is given the lungs remain dry and blood pressure rises whereas, if other causes of cardiogenic shock are present, with the rapid addition of 200 mm. of five per cent dextrose in water the lungs get wet. The lungs are wet, as a rule, if the left ventricle is failing secondary to insufficiency caused by the infarct with an inability to pump blood. There occurs an increase in the left atrial pressure with a back pressure and an increase in central venous pressure. The left atrial pressure and pulmonary venous and capillary pressures rise until pulmonary edema develops. Frequently with a heart attack the heart sounds are distant on auscultation. The presystolic opening of the mitral valve and atrial contraction can be heard as a pre-systolic gallop. This can frequently be heard in an infarction involving the right ventricular wall as well as the left. If the left atrial and pulmonary venous pressure is not elevated then this pre-systolic gallop is present. Due to the delay in emptying, secondary to the involvement of the right ventricle there is occasionally noted a split pulmonic second sound.

Another syndrome is one in which, with an anterior and occasionally a lateral infarct, there is also involvement of the papillary muscle. The papillary muscle fails to contract with the ballooning of the cusp of the mitral valve that is controlled by the muscle. When this occurs there develops an insufficiency of the valve. In these individuals cardiac output may be still fairly good, however, there is a rapidly developing high left atrial pressure, secondary to the acute insufficiency along with which pulmonary edema develops rather rapidly. There is very little that can be done about this.

Next is the rupture of the interventricular septum. As a rule this usually occurs at the apical area and, with the rupture, there frequently are numerous small pulmonary emboli from the fragments of tissue dumped into the right ventricle secondary to the rupture with the acute development of a left to right shunt and rather severe right ventricular strain. There are usually pulmonary complications. There is with this type of lesion the development of the typical systolic murmur of ventricular septal defect along the left sternal border. Occasionally the right side of the heart, if it is also involved in the infarct, will balloon out giving rather rapidly developing right ventricular failure.

Next is the acute ballooning of the ventricle to the point that the heart beat is inefficient with development of circulatory collapse. And lastly, due to strain and force of contraction, myocardial rupture through the infarct area.

Thrombosis is occasionally seen in otherwise normal coronary arteries, cause undetermined. Also, in those arteries in which there is no blockage but in which there are plaques, there are seen frequently platelet thrombi. Platelet thrombi are also seen in the brain during ischemic periods which may be the precursors of these thrombi. This is not so in other areas of the body.

In an acute infarction there are usually three stages. The first stage is that of an acute infarct which has not developed to a far advanced state but with which the peripheral resistance that develops with infarction has developed in full. The peripheral resistance is far greater than that obtained with noradrenalin or any other peripheral vasoconstrictor drugs. This occurs immediately following the myocardial damage. When this occurs at first, and for a varying period, the heart will maintain good output and, during this period, rather high elevation in blood pressure is frequently noted.

Peripher resistance continues and a second stage develops as time passes and the heart begins to get inefficient. As this occurs the blood pressure begins to return to the normal level. Depending on the size of the infarction and the efficiency remaining in the heart the individual may go on into a third stage of cardiogenic shock with a continuation of this extensive peripher vasoconstriction and with a continuing reduction in cardiac output.

The treatment of cardiogenic shock and like states may be introduced by stating that the treatment is poor. Fatality rate is high. As the individual cells begin to get ischemic there develops metabolic acidosis with a build-up of sodium within the cell, potassium outside the cell and a loss of cell membrane charge. The acidosis makes the cells nonresponsive to catecholamines. Lysozymes are released which appear to be destructive enzymes to the cell that are protective in nature, destroying cell membranes and contents. The cellular enzymes SGOT, LDH, and CPK, etc., which are measured, are released into the blood stream as are adenosine diposphate (ADP), which is an irritant, causing both vascular constriction and irritability. Therefore, in the region of the infarct itself, there is poor circulation, there is rapidly developing metabolic acidosis with cell destruction and death. The breakdown products are either dumped into the coronary sinus or into the left ventricle itself. There are irritability ions, (sodium, calcium, and hydroxyl) and sedative ions (potassium, magnesium, and hydrogen). A shift of the potassium, magnesium, hydrogen, and sodium ions then tends to depress myocardial activity. This occurs with acidosis and cell rupture. In the shock stage one of the first things necessary is to maintain the pH at normal or a little to the alkaline side, if possible. This enables the use of catecholamines with some chance of an effective heart beat. Polarizing solution has been advocated. (This is a glucose and insulin solution designed to lower extra-cellular potassium levels in the process of gluconeogenesis with a hope of stabilizing the myocardial cell for better contractility).

In any shock-like state, the pulmonary blood flow to a large extent is through preferential channels, rather than through the alveolar capillary bed with the subsequent lack of oxygenation of a good portion of the circulating blood. For cardiac efficiency oxygen is necessary. It is well known that in any shock-like state, it is impossible to fully saturate the blood with oxygen because of this pulmonary shunting that occurs. One hundred per cent oxygen is used and oxygen intoxication is possible. Oxygen intoxication has two phases. The first phase is due to extremely high oxygen partial pressure causing peripheral vasoconstriction and trapping of lactates and pyruvates and poor circulation, particularly in the brain. The second is in the lungs. In cardiogenic shock there is little need to worry about peripheral toxicity. It has been shown that oxygen can be given over fairly long periods, if it is well humidified, without causing the drying and pulmonary hemorrhage. Moist oxygen can more safely be used in cardiogenic shock. The major effects that come from 100 per cent

oxygen even when completely humidified is paralysis of the pulmonary lymphatic flow, denaturation of surfactant and paralysis of the cilliary mucous esculator. It should also be pointed out that hemoglobin and blood will not carry greater amounts of oxygen at 300-500 mm.Hg. than it will at 100 mm.Hg. As oxygen gets to the injured area, it is not the volume in cc. but the partial pressure of the oxygen that will effect the exchange from the blood stream through the edematous tissues into the injured cells. Therefore, in cardiogenic shock, oxygen given with an IPPB machine that will humidify the oxygen will be of great help.

One other factor that should be covered in relation to cardiogenic shock and heart failure before moving to arrhythmias is the use of the IPPB equipment. As has been mentioned oxygen is best delivered with a IPPB machine that is flow rate controllable and that delivers 100 per cent oxygen completely humidified at body temperature. It has been shown that ventilation alone is a small support of circulation with the heart valves acting in a one way direction. The problem in cardiogenic shock is cardiac output and cardiac output can be augmented to the utmost extent by using intermittent positive-negative pressure breathing support. (See "THE PLACE OF RESPIRATORS IN THE CORONARY CARE UNIT", Oct. 1969, Vol: 39, No: 4, p: 355-360.) In this treatment, one uses a positive inspiratory pressure in the neighborhood of 20-25 centimeters of water with an expiratory negative phase of 3 cm. of water. This will increase circulation and can make the difference between fatal shock and recovery. This procedure is dangerous and if there is obstructive lung disease present, the negative phase can cause trapping and further embarrassment of the ventilation. However, if this is not the case, an intermittent positive-negative phase ventilation will, in itself, increase cardiac output. The other is the use of intermittent positive pressure and continuous positive pressure in acute pulmonary edema. This does cause a decrease in cardiac output, however, the problem in pulmonary edema is one of right ventricular output being much greater than the left ventricular output with a collection of excess fluid in the lungs. An intermittent positive pressure machine is of help because it reduces the negative interthoracic pressure during the inspiratory phase, thus making the pressure less negative. The combination of alveolar negative pressure and blood hydrostatic pressure as opposed by osmotic and tissue pressure, causes or prevents exit of fluid from the blood stream into the alveolar spaces. If a retard cap is used during the expiratory phase then a continuous positive pressure is used with effective results in controlling pulmonary edema. This is more effective than putting tourniquets on the extremities, even where there is cardiogenic shock with pulmonary edema. The intermittent positive pressure equipment with retard cap on expiration is effective and can be used in combination with rotating tourniquets. It is necessary to emphasize the fact that during this period the patient should be watched quite closely, listened to every minute and, upon the lungs becoming dry, short periods without IPPB should be allowed to the patient. With pulmonary edema it must be emphasized that positive-negative pressure is to be avoided at all costs.

Arrhythmias occur in the individual with a heart attack as a result of injury, ischemia, metabolic acidosis, etc. within the myocardium. Certain facts are to be considered. The cardiac circulation is unlike that of other organs. The coronary arteries go over the outer surface with branches, coming off at right angles to go to the sub-epicardium and deeper. These branches branch in a Y fashion as they get smaller and continue into the myocardium. In autopsies of acute arrhythmic death that were not resuscitative, it is interesting that the obstruction to the circulation is in a position where the arteries take off at right angles or at one the "Y" branches. Autopsies on individuals who successfully overcome a heart attack and die at a later time are usually found to have had an occlusion even of major arteries between branches. Any form of arrhythmia in a patient who has had a heart attack is significant.

The normal beats start at the sinus node and progress from here across the atrial myocardium to the AV node, then transverses the AV node, the bundle of this, the left and right bundle and the Purkenjie system to the myocardial muscles. Any of these sites can be the source of arrhythmia. Starting with the sinus arrhythmias there can occur sinus arrest, standstill, sinus variation, sinus bradycardia, and sinus tachycardia. From the atrial themselves there can be premature contractions, atrial tachycardia, atrial flutter, atrial fibrillation. From the AV node, there can be high, middle, and low nodal premature contractions and high, middle, and low nodal tachycardia. There is no arrhythmia comparable to the flutter or fibrillation of the AV node. There may be poor conduction through the AV node with just prolongation of the PR interval. This is first degree AV block. Conduction may get progressively longer with each beat and then a beat is dropped and then repeat the series or every second or third beat is dropped. This is second degree AV block. Third degree AV block is complete blockage with the impulse from sinus or atrial not getting through to the ventricles at which point the ventricles must beat from a source lower down in the AV node or from a source of ventricular origin. There may be blockage of the right or left bundle branch. If there is one source of arrhythmia (one area of muscle that is not depolarized then the rest of the myocardium is depolarized) whose frequency coincides so that you may get from this one source frequent premature contractions known as unifocal premature contractions, or ventricular tachycardia. The whole ventricular myocardium may be irritable as a result of which you get multifocal ventricular premature contractions which in origin coming first from one spot and then another. These can go on to cause ventricular tachycardia, ventricular flutter and fibrillation.

The big causes of trouble that we can do something about are those relative to arrhythmias. With sinus bradycardia atrophine is of help to increase the rate. In atrial arrhythmias, quinidine and digitalis are the most effective drugs. Also, the atrial and sinus arrhythmias are under the influence of the carotid body and vagal nerve. Atrial tachycardia and fibrillation can be terminated by elective cardioversion. Xylocaine, (Lidocaine) and Pronestyl are of less value in atrial arrhythmias. Dilatin may have some effect. Next, there are the nodal arrhythmias with a first degree AV block. This is commonly seen with digitalis and rheumatic fever as well as with ischemia to the node. If this progresses to a second degree AV block, or if complete AV block occurs, it may be necessary to start an IV drip of 2 mg. of Isuprel in 500 cc. of 5% dextrose in water to run from 25-50 cc. an hour depending on the rate required to maintain rhythm. With second degree AV block and complete AV block, it is best to insert a catheter pacer, preferably a demand pacer, which can take over the heart beat when necessary. Here again quinidine is the most effective antiarrhythmia drug. However, there is more success with Xylocaine and Pronestyl in this group of arrhythmias. Electrical cardioversion can be used in nodal tachycardia. The ventricular arrhythmias are the ones of greatest concern. The rule of thumb is that the occurrence of over six premature contractions per minute should be treated whether they are unifocal or multifocal in origin. However, in the coronary patient, multifocal premature ventricular contractions suggest a deteriorating myocardium and it is wise to listen closely for the development of an early diastolic gallop, secondary to the failing myocardium. As these arrhythmias develop the standard treatment is 50 mgm. of Xylocaine (Lidocaine) in one bolus IV. If this is effective in controlling the extra systoles, then prepare and start an IV drip of 1 gm. of Xylocaine (Lidocaine) in 500 cc. of 5% dextrose in water to be run at 25-50 cc. per hour depending on the amount required to control the arrhythmias. In the case of ventricular tachycardia the same is necessary. Ventricular flutter and fibrillation, of course, require cardioversion.

Cardiac arrest, if acute, may be due to

ventricular fibrillation, cardiac standstill, or profound cardiovascular collapse. When this occurs the patient becomes unconscious, no respiration or very minimal respiration, and no pulse. The patient should be immediately given mouth-to-mouth resuscitation for three to four breaths, and then two to three strong blows to the chest in an effort to start the heart. If this is unsuccessful then cardio-respiratory resuscitation is necessary by whatever means available: mouth-to-mouth, hand bag, or respiratory with closed chest cardiac massage, until the patient can be electrically controlled, restarted, or pronounced dead. Since metabolic and respiratory acidosis develop extremely radidly, acute measures should be taken to counteract acidosis, usually sodium bicarbonate, 1 amp. every ten minutes IV. Adrenalin, ½-1 cc. given every three to five minutes IV or in adrenalin drip. Atropine sulphate, 1/150 grain every 15 minutes IV. Calcium chloride, 10 cc. in a 10% solution IV is given, every ten to 15 minutes. Other catecholamines may be used.

A final note is that with an acute arrest where the patient has to be resuscitated, cerebral edema is common. Various methods and materials have been used to combat this cerebral edema. It is of interest that recent studies have pointed out that the use of urea is immediately quite good, but has a very strong rebound probably worse than the original cerebral edema. Also, this is true of albumen though somewhat less prolonged. Mamitol carries some rebound but not anywhere near that of urea. Apparently the simplest for long-term use is glycerin orally, and hypothermia, to combate cerebral edema. Of the IV medications, Mamitol and Dextran 40 are the better of the solutions, though not as acutely effective. The rebound phenomenon is much less with a better long-term outlook.

Finally is hyperventilation with 100% oxygen to produce alkalosis, with low CO_2, high O_2 to produce cerebral vaso constriction to combat increased vascular volume and edema.

DOCTORS
Who Play With Fire
(Their Favorite Recipes)

MOUSSAKA A LA GRECQUE Serves 8-10

Peel 3 medium-size eggplants and cut into slices about ½ inch thick. Brown quickly in 4 tablespoons butter. Set aside.

Heat 4 tablespoons butter in same skillet and cook 3 large onions, finely chopped, until they are brown. Add 2 pounds ground meat, lamb or beef, and cook 10 minutes. Combine 3 tablespoons tomato paste with ½ cup red wine, ½ cup chopped parsley, ¼ teaspoon cinnamon, salt and fresh-ground black pepper to taste. Stir this mixture into meat and simmer over low heat, stirring frequently, until all liquid has been absorbed. Remove mixture from fire.

Preheat oven to moderate (375 degrees F.).

Make a white sauce by melting 8 tablespoons butter and blending in 6 tablespoons flour, stirring with a wire whisk. Meanwhile bring 1 pint milk to a boil and add it gradually to the butter-flour mixture, stirring constantly. When mixture is thickened and smooth, remove it from heat. Cool slightly and stir in 4 eggs (which have been beaten until frothy), nutmeg and 2 cups ricotta or cottage cheese.

Grease an 11x16 inch pan and sprinkle bottom lightly with bread crumbs (have one cup prepared in advance). Arrange alternate layers of eggplant and meat sauce in the pan, sprinkling each layer with Parmesan cheese and bread crumbs. Pour the cheese sauce over the top and bake one hour, or until top is golden. Remove from oven and cool 20 to 30 minutes before serving. Cut into squares and serve.

(Note: The flavor of this dish improves on standing one day. Reheat before serving).

—Hughes Kennedy III, M. D.
Birmingham

What the doctors in this country need is a simple, accurate lab system for under $600.

That's why we invented the UNITEST SYSTEM.

Physicians can't operate their offices like doctors did in the old days.

That's when the patient load was lower and so was the overhead, in case you wanted to have lab tests performed right on the premises. There were a lot more qualified technicians for hire, too. Or if you didn't want the bother and payroll of a bigger staff, you sent specimens out to a local lab or a nearby hospital. Then you waited for results to return and added the charge to the bill.

Problem is, that way isn't economically feasible any longer. More sophisticated lab tests have been developed to aid your diagnosis. Fewer skilled personnel are available. The complex equipment required is more expensive. And the cost of space is premium.

Somebody had to solve this king-sized problem. We did.

We perfected the compact UNITEST SYSTEM. You start with the heart and brains, the Unimeter. It sells for below $600. Far below, in fact. Then, you add-on components you don't already own. When you're done, any qualified person in your office can run 14 tests for the most commonly-needed determinations. That includes Blood Glucose, Hemoglobin, B.U.N., Uric Acid and Cholesterol.

And you get accurate test results faster, often before the patient leaves.

Yes, the compact UNITEST SYSTEM is a lot smaller than you'd expect for equipment that does so much. And there are so many functions it does so well, you really owe it to yourself to get more information. Some is on the following page. The card below will bring you all of it. Just complete, detach and mail.

Bio-Dynamics, Inc.
The Simplifiers

9115 Hague Road
Indianapolis, Indiana 46250

Gentlemen:

I am interested in receiving more information about use of the UNITEST SYSTEM in my office.

Name _____

Address _____

City _____ State _____ Zip _____

Phone No. _____

The UNITEST SYSTEM provides these important features:

The Unimeter—The Unimeter 250 is a precisely-calibrated, solid state colorimeter. Rugged in design and simple to operate, it has only three controls: on-off switch, calibration control dial and temperature control button.

The Select-a-Fuge 24 — The most advanced centrifuge in its category ever developed . . . a single unit capable of performing *three* centrifugated preparations where at least two units were previously required . . . and in the shortest possible time for each specimen involved. The Select-a-Fuge 24 can prepare urine specimens at the low speed of 4000 rpm . . . or perform uniformly consistent serum, plasma and hematocrit results at 10,000 rpm. Other preparations requiring graduating intermediate speeds may also be conducted. Select-a-Fuge 24 does all this without changing equipment, without adding or removing parts.

Built-in Incubator — The Unimeter has a convenient built-in incubator which holds twelve tubes at a constant temperature of 37°C. There is an instant push-button temperature check.

Interchangeable Meter Faces—The slip-in meter face cards with color-coded test scales allow the operator to adapt this unit to a variety of tests and to incorporate any new tests which may be added in the future.

Push Button Pipetting—Automatic Pipette controls critical measurements precisely with remarkable ease and speed. Assures dependable results between operators, regardless of their individual skills.

Unitube—The optically correct, glass Unitube contains reagent materials. It also contains the reaction and is used as a cuvette, when the reaction is complete. After the result is recorded the Unitube is discarded. Unitube caps are color-coded for each test.

Unitest Kits — Each kit contains everything necessary to perform the tests. Everything is pre-measured, color-coded, sealed against contamination and disposable. Simple, step-by-step illustrated instructions are enclosed in every kit. Kits are available in a variety of sizes.

For full details, mail this card today!

Bio-Dynamics, Inc.
The Simplifiers

First Class
Permit No. 4810
Indianapolis, Ind.

BUSINESS REPLY MAIL
No postage necessary if mailed in the United States

Postage will be paid by

Bio-Dynamics, Inc.
Box 50100
Indianapolis, Indiana 46250

EMERGENCIES

by Eugene C. Sherlock, M. D.
Department of Surgery
University of Alabama Medical Center

Emergency (L. emergere to raise up). An unlooked for or sudden occasion; an accident; an urgent or pressing need.

To introduce the subject of emergencies, one must realize there are 1,950,000 automobile accidents per year with 53,000 deaths. Almost 9,000,000 accidents of other types befall persons of this country annually. It must be borne in mind that treatment begins at the accident site. Thus we have involved lay people, ambulance drivers, police or state troopers, physicians and nurses.

I am not competent to discuss the Good Samaritan laws or its implications. I can state there is an active program of ambulance drivers and police first aid courses which are reviewed periodically. Most road-side type of first aid consists of maintaining an airway, controlling hemorrhage, and stabilizing fractures prior to the rush to the hospital.

In a broad sense I will divide emergencies into three participating constituents. First, the hospital. All hospitals are not required nor do they need an emergency room. Here at VA we have no active emergency room, but enjoy the nearness of the University's which is one of the finest in the South.

It is the administration's responsibility in emergencies to provide equipment and equipment maintenance and set forth procedures which are rehearsed in case of disasters, etc. Most of their responsibilities are found in the Joint Commission on Accreditation of Hospitals.

The most difficult procedure to carry out in emergencies is the maintenance of proper records. In the heat of rapid actions and decisions in catastrophic events, it is most easy to neglect well thought out, concise recording. For the non-operating room emergencies most will fall into a fairly standard procedure which should be familiar to the entire medical staff and nursing personnel.

The cardio-pulmonary resuscitation takes precedence over all other subsystems. There

(Continued on Page 256)

(This is the second in a series of talks given by prominent attorneys and physicians on malpractice and medical jurisprudence.)

His makeup is unique by tradition.
His ulcer treatment is unique by tradition, too.

In the world of entertainment, a clown's makeup remains the exclusive property of its originator. Time has established that tradition. In the treatment of ulcers and other gastrointestinal complaints, time has established Pro-Banthine as a tradition too.

Few drugs can boast a longer successful run. Introduced 17 years ago, this drug is a veteran gastrointestinal performer.

Pro-Banthine stars in the treatment of peptic ulcer, functional gastrointestinal disturbances, ulcerative colitis, hypertrophic gastritis, pylorospasm, acute and chronic pancreatitis, diverticulitis, biliary dyskinesia, hyperhidrosis, ileostomies, and colonic, ureteral or urinary bladder spasm. Its fame as an anticholinergic is worldwide.

When you want a performer you can count on . . . remember Pro-Banthine. Tradition does.

SEARLE Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

Pro·Banthine®
(propantheline bromide)

the traditional ulcer treatment

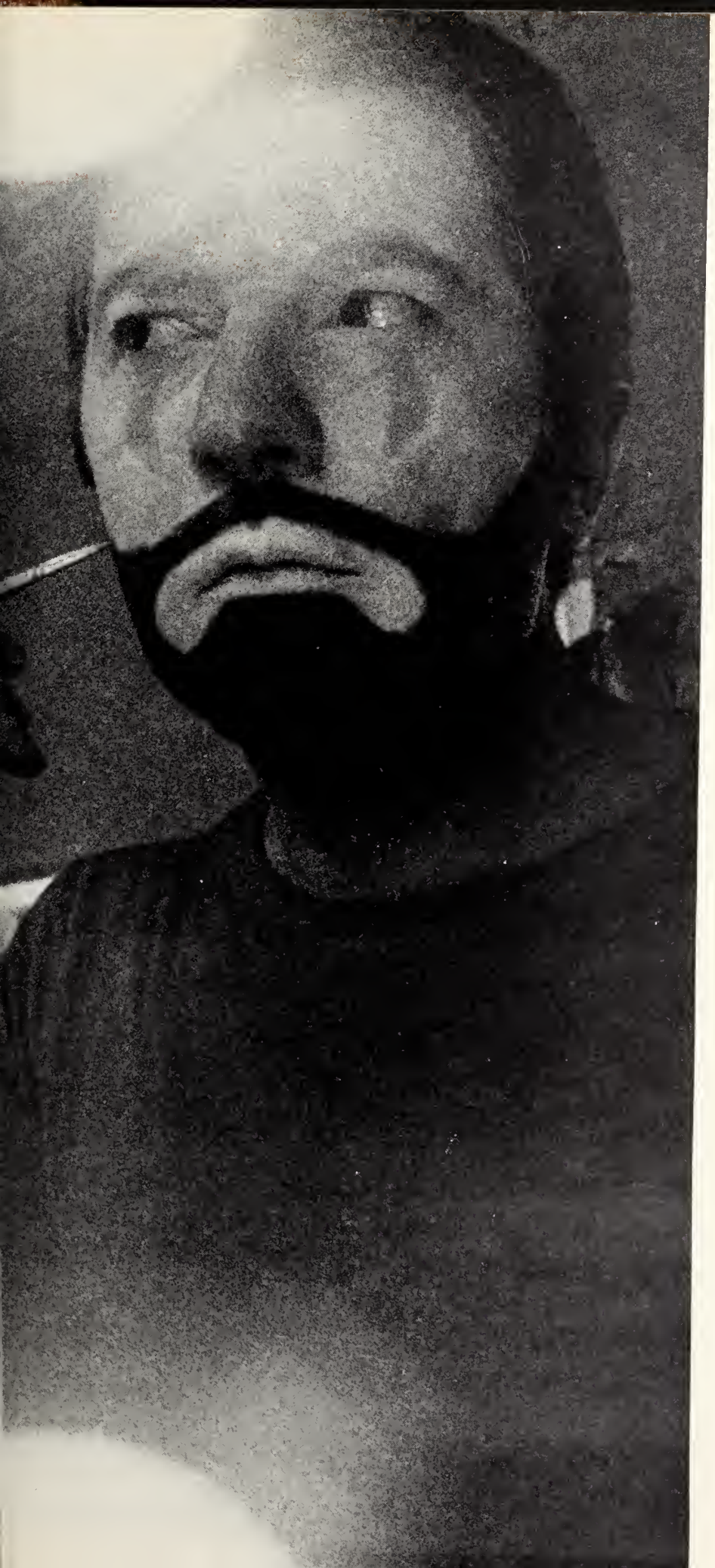
Pro-Banthine 15 mg. propantheline bromide

Pro-Banthine 15 mg. propantheline bromide with Dartal 5 mg. thiopropazate dihydrochloride

Pro-Banthine 15 mg. propantheline bromide with Phenobarbital 15 mg. warning: may be habit forming

Pro-Banthine P.A. 30 mg. propantheline bromide in time-release form

Pro-Banthine 7½ mg. propantheline bromide Half Strength



Pro·Banthine®
(propantheline bromide)

Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Dartal® 5 mg.
(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.

Contraindications: Glaucoma, severe cardiac disease.

Warnings: Pro-Banthine with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

Adult Dosage: One tablet three times a day.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Phenobarbital 15 mg.

Warning: May be habit-forming.

For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthine P.A.®
prolonged acting brand of propantheline bromide

For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthine.

Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

Dosage: The recommended initial dosage is one tablet in the morning and one at night.

084

SEARLE

Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

(Continued from Page 253)

is the well known ABC's of cardio-pulmonary resuscitation.

(A) If unconscious, control the Airway

(B) If not breathing, ventilate the lungs

(C) If no pulse, closed cardiac massage

These three steps should be second nature to medical and allied fields. Patients should be evaluated in the same order and resuscitated.

The best way to avoid certain emergencies is their avoidance. Elective surgery should not be carried out under suboptimal conditions. With all elective operative cases, a complete history and physical should be done and recorded by the physician on the chart prior to a preoperative visit by the anesthesiologist. Any unusual findings certainly should be recorded and discussed with the anesthesia department prior to induction of general anesthesia. The surgeon should be present at the time of induction and have in his mind a well formulated plan of cardio respiratory resuscitation if arrest occurs. All hospitals should have "cardiac arrest carts" available in the operating room at all times.

For emergencies which arise in an emergency room after sustaining severe trauma, a slightly different procedure is carried out. The airway is evaluated, all cothing is removed, the pulmonary ventilation evaluated and maintained. Records are started for vital signs, medications, etc. Hemorrhage is controlled, intravenous infusion routes are established and the indicated fluid begun. Nasogastric intubation and drainage of the urinary bladder are effected. Once the cardio-pulmonary status approaches stability and while awaiting laboratory results a more thorough examination is possible, including X-rays, etc. A similar pattern of resuscitative measure is carried out for inpatient emergencies such as massive upper GI bleeding, etc. Although, in the broad sense patients in the intensive care units have no true emergencies since difficulties were anticipated. The personnel in these areas should be expected to exhibit a great deal more expertise in catastrophic events. Needless to say, appropriate equipment and medication should be available in these areas at all times. There should be an ongoing training program for predictable events such as cardiac arrests, cardiac arrhythmias, etc. The nursing personnel in these areas should be knowledgeable enough to administer potentially dangerous drugs without a physicians order while awaiting his arrival.

Upon admission of a patient to a hospital and on subsequent evaluation one should formulate a priority in his mind which patients are candidates for intensive resuscitative measures. By this, I mean, I would be unwilling to undertake resuscitative measures for terminal cancer patients. Nursing personnel should be educated to exercise good judgment and undergo continuing education, evaluated by peer review so that they might stay abreast of ongoing procedures. She must anticipate impending emergencies before the event becomes catastrophic and notify the appropriate personnel to aid in the patient's care. Needless to say, surgical nurses will be more familiar with emergency procedures most apt to happen on surgical floors and the converse would be true for medical nurses.

Larger hospitals which maintain 24 hour a day coverage by physicians should set up cardiac arrest teams who are well versed in the appropriate resuscitative modalities.

For the legal implications of emergencies physicians should keep accurate records which are up to date and practice good medicine, because Good Medicine is Good Law.

Ugliness

It was not until I had attended a few postmortems that I realized that even the ugliest human exteriors may contain the most beautiful viscera, and was able to console myself for the facial drabness of my neighbors in omnibuses by dissecting them in my imagination.—J. B. S. Haldane

Medical Information Service via Telephone (MIST)*

Margaret S. Klapper, M. D.

The rapid technological and scientific progress following World War II has influenced immeasurably the course of medicine, and the struggle to find practical ways to make continuing medical education a real continuum, which its name implies, but which it is not, continues. Yet there is still no answer. The ingredient still lacking is a conceptual scheme for continuing medical education which would relate educational programs directly to identified physician and patient needs and would clearly demonstrate for both physician and educator that the need has been met; that patient care has been directly affected and improved. It was out of this effort to relate learning directly to patient care that Medical Information Service via Telephone (MIST), the brain-child of Dr. Meador, was conceived and, after a six-month gestation period, brought to delivery. Those of us concerned with the program first felt we might have a fragile, immature infant with all systems not yet "go." We soon found that we had a lusty offspring with much greater inner strength and determination to develop than we had at first anticipated.

I will not go into detail concerning the "information gap," the need to translate scientific knowledge to practical use, the difficulties of physicians leaving their practice, the low physician-population ratio, particularly in rural sections, the trend to specialization, and the diminishing group of family physicians. These are all well known facts to you and us, and only serve to emphasize our recognition that some form of communication which would be prompt, to the point, and within the grasp of physician and medical center would serve as most needed and useful service.

Personal conversations and discussions with physicians, review of the types of telephone calls reaching the faculty of the Medical Center, plus the Dean's experience during his years of practice served as the background for the concept of MIST. In a large medical center, consultations are constantly in process in the halls, over coffee, at rounds; and, in a sense, this is the method of teaching clinical medicine to medical students and housestaff physicians. The transfer of information between colleagues in practice has not been measured, but we all recognize that it, along with pertinent reading, is probably the principal source of continuing education which is most immediately translated into improved patient care.

Discussions with practitioners reveal that what they most miss and need after leaving their formal training are opportunities to seek not only the reassurance but the experience of other physicians. This is particularly true of those in communities where there are few other physicians. In the past, physicians often called the Medical Center to discuss problems with the faculty of the school. When they knew the individual to call, this was usually effective and fairly quickly accomplished, being subject only to the delays of locating the individual concerned. More often, the practitioner was unaware of the total array of specialties and individuals available to him and uncertain as to the appropriate medical or surgical group to contact. He often relied upon physicians he did know at the Medical Center to identify and relay the telephone call to other physicians; thus he and those at the Medical Center were subject to delay, confusion, fraying of tempers, and many times complete frustration before reaching the desired individual. Most, if not all of you in this room have had such experiences. I do not have to point out to this group that such a method consumes valuable time of all physicians concerned and is not conducive to good medical relation-

(Continued on Page 263)

*Presented at the annual meeting of the Alabama Chapter of the American Academy of General Practice (June 1-4, 1970) and at the annual joint meeting of the Alabama State Medical Association and the Volunteer State Medical Association (June 10-12, 1970)

BREAKUP—symbol of the impact of emotional stress. But when the stress exceeds transient rage or depression—and settles into a chronic mixed anxiety depression state—combined tranquilizer-antidepressant therapy could be indicated.

FOR MODERATE TO SEVERE ANXIETY WITH COEXISTING DEPRESSION

TRIAVIL®

TRANQUILIZER-ANTIDEPRESSANT

Containing perphenazine and amitriptyline HCl

For prescribing information, including indications, contraindications, warnings, precautions, and side effects, please see following page.

FOR MODERATE TO SEVERE ANXIETY WITH COEXISTING DEPRESSION

TRIAVIL®

TRANQUILIZER-ANTIDEPRESSANT

Containing perphenazine and amitriptyline HCl

TRIAVIL®2-10: Each tablet contains 2 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

TRIAVIL®2-25: Each tablet contains 2 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

TRIAVIL®4-10: Each tablet contains 4 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

TRIAVIL®4-25: Each tablet contains 4 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

INDICATIONS: Patients with moderate to severe anxiety and/or agitation and depressed mood; patients with depression in whom anxiety and/or agitation are severe; patients with depression and anxiety in association with chronic physical disease; schizophrenics with associated depressive symptoms.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; pregnancy; and in patients with known hypersensitivity to phenothiazines or amitriptyline. Do not give in combination with MAOI drugs because of possible potentiation that may even cause death. Allow at least two weeks between therapies. In such patients therapy with TRIAVIL should be initiated cautiously, with gradual increase in the dosage required to obtain a satisfactory response. Do not give concomitantly with guanethidine or similarly acting compounds since it may block the antihypertensive effect.

WARNINGS: Patients should be warned against driving a car or operating machinery or apparatus requiring alert attention, and that response to alcohol may be increased.

PRECAUTIONS: Suicide is always a possibility in mental depression and may remain until significant remission occurs. Supervise patients closely in case they may require hospitalization or concomitant electroshock therapy. Untoward reactions have been reported after the combined use of antidepressant agents having various modes of activity. Accordingly, consider possibility of potentiation in combined use of antidepressants. Use with caution in patients with glaucoma and those with problems of urinary retention. Perphenazine can lower the convulsive threshold in susceptible individuals. It should be given with caution to patients with convulsive disorders. Dosage of the anticonvulsive agent may have to be increased. Not recommended for use in children. Mania or hypomania may be precipitated in manic-depressives (perphenazine in TRIAVIL seems to reduce likelihood of this effect). If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Caution patients about errors of judgment due to change in mood.

ADVERSE REACTIONS: Similar to those reported with either constituent alone.

Perphenazine: Should not be used indiscriminately. Use caution in patients who have previously exhibited severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia. Other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); grand mal convulsions; cerebral edema; polyphagia; photophobia; skin pigmentation; and failure of ejaculation. Significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides.

Amitriptyline: Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypertension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; impotence; increased appetite and weight gain; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, stomatitis, blurring of vision, reversible dilatation of the urinary tract, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. Elderly patients and adolescents can often be managed on lower dosage levels.

For more detailed information, consult your MSD Representative or see the package circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486.

MSD MERCK SHARP & DOHME

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfonilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfanamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream – Four-ounce tube with or without applicator. Suppositories – Box of 12 with applicator.

TRADEMARK: AVC AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

(Continued from Page 257)

ships, good patient care, nor to a good educational experience.

During the first half of 1969, upon the endorsement of Dr. Meador, members of the Division of Continuing Medical Education undertook specific planning for a telephone service to be made available to practicing physicians. It was the intent of those concerned to devise a telephone system that would (1) enhance patient care, (2) bring the practitioner into a closer working relationship with the faculty of the University of Alabama in Birmingham Medical Center, (3) continue the medical education of the practitioner by aiding him at a time when he needs help with a particular patient problem, (4) reinforce this assistance with pertinent library material, (5) alert the academician to the changing needs of the community physician, (6) continue the medical education of the academician by providing him a better concept of medical practice and the delivery of medical care, and (7) provide direction to the Division of Continuing Medical Education in identifying educational needs of the physicians of the state.

The primary purpose of MIST is to improve patient care by providing an immediate person-to-person consultative service to practitioners of Alabama from the faculty of the University of Alabama School of Medicine. Callers reach the MIST operator by dialing a specific toll-free number. The operator is housed in the central office of the Division of Continuing Medical Education. The MIST operator has been trained in the medical sciences sufficiently to serve as an "outfielder" so that calls may be relayed to the proper individuals. A structured on-call schedule is maintained in the larger departments and electronic alerting devices are utilized for ease in location of individuals. The out-going WATS line is used to return calls if the individual is not immediately available or when the consultation, which it often does, requires an interchange of discussion over a period of hours or days. All areas within the Medical Center complex respond to calls, and there has been particular enthusiasm in participation by the Department of Dietetics, Nursing Service, and Hospital Administration. When appropriate, relevant literature on the subject of the consultation is forwarded to the practitioner within three days as an immediate educational reinforcement at a time of particular interest.

The operation of MIST is relatively simple. Incoming and outgoing WATS lines with accompanying centrex tie lines and a recorder comprise the "hardware." An administrative assistant from the Division of Continuing Medical Education (DCME) coordinates the endeavor and an operator sufficiently knowledgeable in the medical sciences to "field" the calls make up the personnel. The MIST operator is on duty from 8:00 a.m. to 5:00 p.m. five days per week. After hours and on weekends the hospital switchboard "call operator" accepts the calls, inquiring whether the call is an emergency or if it may be returned the following morning. If it is an emergency, it is immediately routed to the individual on call; if not, it is returned next morning. At no time is a call responded to by a recording. The program is administered by a committee from the DCME. Faculty participate through a structured on-call schedule, and electronic alerting devices help assure promptness of response. All calls are recorded, monitored, and data extracted for analyses and educational planning.

The operational pattern as initially devised provided for a pilot study to include four counties: Madison, Lee, Crenshaw, and Dallas. These counties have a total population of 300,000 people and 200 physicians. The selection included a rural county (Crenshaw —population 14,690), an urban county (Madison—population 194,360), and two intermediate sized counties (Lee—population 56,069, and Dallas—population 58,491). After receiving appropriate endorsement of the Medical Association of the State of Alabama and the four county medical societies, a letter was sent to each physician in the four counties describing the MIST service and inviting him to participate. A description of

the service was also included in the *Journal of the Medical Association of the State of Alabama* and a news item, with the MIST number included, in the *Alabama M. D.* The WATS line is inclusive of the state, and through these latter publications, physicians of the entire state were informed they also might use the service.

Funding for the six-month pilot project was shared by the School of Medicine, partly from AMA-ERF funds, and the Alabama Regional Medical Program. Faculty time is provided without reimbursement.

Initially, there was some concern and certain doubts voiced: Would this be interpreted as a method to increase referrals to the Medical Center? Would practicing specialists consider their consultative services in jeopardy? Would enthusiasm of the faculty wane? Would others than practitioners and health personnel individuals learn the number and seek information? Would practitioners object to identifying themselves and object to the recording? Would practitioners and faculty abuse the service by using it for personal, non-medical calls?

These doubts proved unfounded and were quickly dispelled. To date, there has been no abuse of the service. It has allowed many patients to be managed at the local level or has shortened the University Hospital stay by having part of the work-up completed prior to admission. Availability of diagnostic studies at points closer to the individual's home can often be pointed out.

The reception of MIST by the practitioners has been enthusiastic, and its growth and usage has surpassed our expectations. During the first month of operation there were 81 calls from 21 counties; 19 of these were from the four counties engaged in the pilot project. The 15 doctors from these four counties who utilized the service during its first month were mailed cards to be returned stating whether they were satisfied with the service. All cards were returned, and all were complimentary of the program.

By the end of the six-month trial period it was apparent that the whole state was participating in the program as actively as the four pilot counties and results could be studied and tabulated on a state-wide basis. This was also true for the Medical Center. Initially, the departments of Medicine and Surgery were to participate, the other departments, being smaller and with fewer faculty, to be brought into the program later. Once the service became available, calls in all specialties were received, as well as calls from other health personnel. These have been accepted and channeled as responsively as possible. Hence, what was to be a pilot program from two School of Medicine departments and four counties practically overnight became a Medical-Center-Statewide program.

Toward the end of the six-month period, 125 evaluation cards were sent to physicians who had utilized the service. Two-thirds of these were returned, and all indicated they were satisfied. Two qualified their approval by pointing out that follow-up information on referred patients could be improved upon. This was taken as constructive criticism, and attempts are being made to alleviate this real and recognized delay in the transfer of information. Faculty were informed they might use the outgoing MIST line to referring physicians upon discharge of their patients. Many are doing so, and practitioners are pleased with this added personal expression of interest.

During the first month of service a total of 81 calls from 33 physicians were received. During the ninth month 263 calls from 144 physicians were received. During the nine-month period 1,521 calls from 480 physicians were received. This latter figure indicates that approximately 20 per cent of the practicing physicians in Alabama have used the service. If the more than 700 physicians of the Birmingham area are excluded, since they rarely call by the MIST number, this per cent approaches 35 per cent. Presently, all counties have utilized the service but three, one of which has no physician. Physicians

in the others total seven. Figure 1 depicts the breakdown of calls by month for the first nine months of operation. The growth curves of utilization by general practitioners, specialists and other health personnel are shown in Figure 2. The per cent of general practitioners in Alabama is 30.5 per cent, as compared to 69.5 per cent specialists, exclusive of full-time faculty physicians. The majority of calls pertain to internal medicine and the ten most frequently called areas are shown in Figure 3.

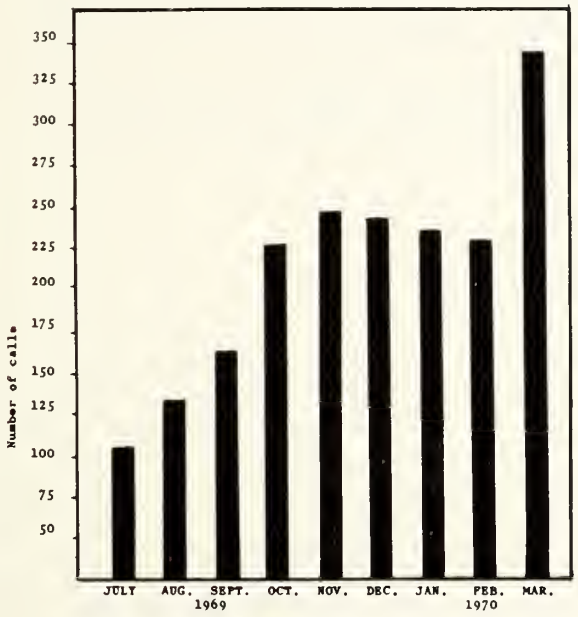


FIGURE 1- MIST calls by month-first 9 months of operation.

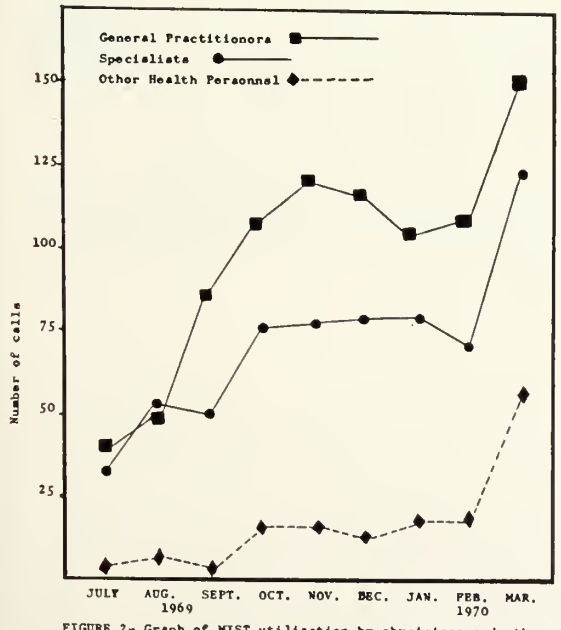


FIGURE 2- Graph of MIST utilization by physicians and other health personnel during first 9 months of operation.

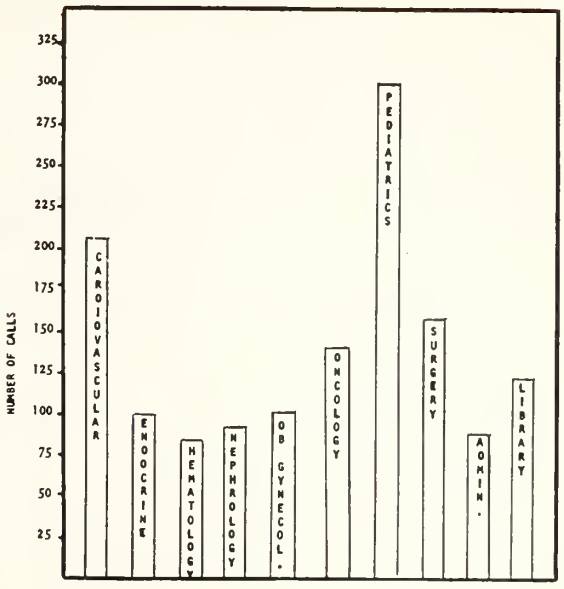


FIGURE 3- 10 most frequently called areas in Medical Center-initial 9 months of operation.

No. Calls	No. Physicians
1-5	378
6-10	65
11-20	28
21-25	4
26-30	3
Over 30	2

1,521 calls were made by 480 practitioners.

TABLE 1-Practitioners utilizing MIST-first 9 months of operation.

No. Calls	No. Faculty
1-10	114
11-20	25
21-30	5
31-40	2
41-50	1
51-60	1
61-70	1
71-80	0
81-90	1

1,218 calls were responded to by 152 faculty.

TABLE 2- Faculty responding to MIST calls-first 9 months of operation.

(Continued on Page 268)

When you choose a tetracycline...

Your first concern: Integrity of product.

Effectiveness: ACHROMYCIN Tetracycline is a crystalline broad-spectrum antibiotic which provides effective therapeutic activity against susceptible microorganisms.

Contraindication: History of hypersensitivity to tetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Some patients may develop a photodynamic reaction to natural or artificial sunlight. Those with a history of photosensitivity reactions should avoid direct exposure to sunlight while under treatment. Discontinue drug at first evidence of skin discomfort.

Precautions: Use may result in overgrowth of nonsusceptible organisms. Constant observation is essential. If new infections appear, take appropriate measures. Use of tetracycline during teeth development may cause discoloration of teeth.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity reaction, onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose-related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels have been reported following full therapeutic dosage. This symptom has dis-

Your second concern:
~~Cost to the patient.~~

Scratch the second because Achromycin V Capsules now priced at "generic" levels!

Now you can feel as comfortable about its cost as you always have about its quality.

Achromycin® V Tetracycline HCl capsules

peared rapidly when drug is discontinued. Teeth—dental staining ellow-brown) in children of mothers given tetracycline during e latter half of pregnancy, and in children given the drug during e neonatal period, infancy and early childhood. Enamel hypoasia has been seen in a few children. Blood—anemia, thrombotopenic purpura, neutropenia, eosinophilia. Liver—cholestasis ure), usually at high dosage. Tetracycline may form a stable calcium complex in bone-forming tissue. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate erapy.

erage Adult Daily Dosage: One Gm. per day, in 4 divided doses 250 mg. each. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle

LEDERLE LABORATORIES
A Division of
American Cyanamid Company
Pearl River, New York 10965

298—0

(Continued from Page 265)

Information regarding the 1,521 calls by 480 practitioners is shown in Table 1. Nine practitioners have utilized the service 20 or more times. Table 2 provides comparable information for the 152 faculty members responding to 1,218 calls. Eleven faculty have responded to 20 or more calls. The apparent discrepancy between total calls by practitioners and total responded to by faculty is accounted for by calls from practitioners to other health personnel of the medical center.

It is of interest that four of the individual faculty members receiving the largest number of calls are the only such specialists on the faculty and the fifth is engaged in a special study in neurology. The sixth one is a director of MIST who, in addition to his subspecialty, accepts general medical calls and those calls not readily identified for other channeling. It is also of interest that of the two faculty receiving the largest number of calls, one is an oncologist, the other a neonatologist. The consultative service of MIST is provided largely by senior faculty, as may readily be noted in Figure 4. To date, 3,304 pages of library material have been sent as follow-up material to consultations or upon physician request.

The pattern which emerges shows that

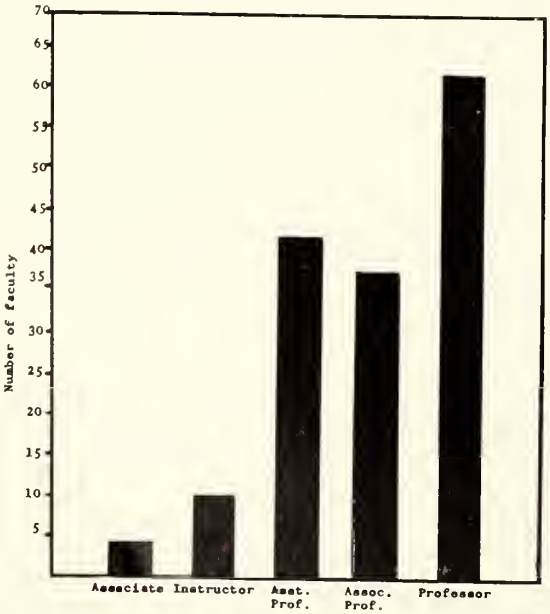


FIGURE 4- Faculty rank of responders.

most calls are directly related to an individual patient, usually while the patient is in the practitioner's office. Relatively few are emergencies of great immediacy, and practitioners cooperate beautifully in limiting night and weekend calls to emergency situations. Night calls presently average two to three per week and weekend calls three to five, largely on Saturdays.

Most physicians want to inquire about new and advanced forms of therapy which can be used for their patients there and then, or about new and advanced diagnostic techniques. Calls run the gamut from the routine and mundane but perplexing aspects of practice to highly dramatic situations.

Neonatologists at the Medical Center perform osmolality tests on amniotic fluid from patients with the Rh factor for physicians over the state. MIST is utilized to call results to practitioners and advise them how often to do the studies, when to induce labor, and when to transfuse the neonates. This dialogue via MIST extends over varying lengths of time, and both practitioner and neonatologist are gratified when these babies are born and are doing well. Physicians calling Neonatology are invited to visit the Newborn Nursery at their convenience.

Analysis of the subject matter of the calls is providing direction to the Division of Continuing Medical Education for projected educational planning. Intramural courses during the next year are being planned to include topics about which information has been most frequently sought, such as oncology, cardiology, and infectious diseases. As a result of the frequency with which Neonatology is called, there is an increasing number of physicians and health personnel responding to the invitation to spend time in the neonatal division and nursery, and the director is being invited to speak to hospital staffs over the state.

Our experience with MIST during the first nine months of operation has been a most rewarding one. The objectives mentioned earlier are being met, and the committee ad-

ministering the service is planning further development of the potential of the telephone as a means of improved transfer of medical information between practitioner, health personnel, and faculty and staff of the Medical Center. The steadily increasing volume of calls has already demonstrated need of increased staff and additions to the equipment. A pilot program to increase the flow of medical information between the Veterans hospitals of Alabama and the Medical Center has been planned, and funds are being sought. These include the telephonic transmission of electrocardiograms, carotid pulse tracings, and phonocardiograms, and the use of the telephone for telelectures and teleconferences. The latter may be presented as single presentations or as ongoing instructional courses for either physicians or other health personnel. The addition of the Dial Access Library is also a part of this project. The Dial Access Library provides physicians immediate access to current, pertinent and authoritative information through a library of self-winding cartridge tapes, each approximately five minutes in length. These are available 24 hours a day merely by making a telephone call and requesting the tape. The tapes contain core information on subjects of an emergency nature and recent discoveries difficult to find elsewhere. Each physician is provided a brochure listing the title of the tapes and the dial numbers. The Dial Access Library was developed at the University of Wisconsin to serve the physicians of Wisconsin and is now available for purchase. Later, we are hopeful of adding electroencephalographic transmission, as well as radio scans and X-ray facsimiles, and possibly pictophonic transmission.

In closing, I would say that as the MIST service approaches the completion of its first year, its growth and acceptance speak for themselves as to its success. In our opinion, it is the actual patient situation and close personal communication between the practitioner caller and faculty responder which constitute the keynotes of MIST. It is this close interpersonal relationship and understanding which contribute largely to its success and is an aspect which must be maintained as the service moves forward.

The Pill

The doctor in the delivery room is an old hand at it. He grabs the newborn baby by the feet and slaps him smartly across the bottom. Then, a startling thing happens. Instead of crying, the baby starts to laugh. He laughs and laughs and laughs. The doctors and nurses are astounded. They examine the infant and see that one tiny hand is clinched into a tight fist. They pry the fingers open and as they do, the infant starts to laugh again. Clinched in its small hand is a little pill.

Not just a motel
it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

Fathers and Sons in Medicine

The Three Drs. Payne From Walker County

In age, Walker County stands squarely in the middle of Alabama's 67, with 33 counties older than Walker and 33 younger.

Which would have no significance here except for the fact that one of the earlier residents of Walker County was a soldier of the American Revolutionary War. His name was Mathey Payne, and he was 76 years old on June 1, 1840, according to the Pension rolls of that time.

Actually, the elder of the three—Thomas Jefferson Payne, Jr.—was born just over the line, at Coalburg, Jefferson County, March 6, 1909. But his early schooling and through high school were in Dora, Walker County. With his baccalaureate from Howard (now Samford), his M. D. for Tulane, he interned at Baptist Hospital, New Orleans, and began practice in Jasper in 1936.

A past president of the Walker County Medical Society and a past vice president for MASA's Northwest Division, Dr. Payne also has been active in the civic affairs of his community.

He is married to the former Mary Lou Thomason of New Orleans and there are two sons, both doctors, and two daughters, Linda Payne Word and Lisa Payne, and seven grandchildren. Dr. Payne lists his hobbies as gardening, along with swimming and boating.

Thomas Jefferson Payne III was born July 23, 1937, at Jasper. After graduation from Walker County High, he earned an A. B. degree from Birmingham-Southern before going on to the University of Alabama Medical College, receiving his M. D. in 1963. After a rotating internship at University Hospital, Birmingham, he completed his OB-GYN residency in 1967, and was in private practice in Jasper from then to last June, when he took up a Diagnostic Radiology residency at the University of Alabama Hospitals and Clinics in Birmingham. Like his father before him, he served a term as president of the Walker County Medical Society.

Dr. T. J. Payne, Jr. (center) with two sons, Dr. T. J. III and Dr. L. T. Payne

Dr. Thomas J. Payne III, this second of the trio, is married to the former Mary Katherine Cranford of Birmingham, and they have three children: Katherine Howard, 4; Thomas Jefferson IV and Lillian Ann, twins, age 2.

Two years younger than his brother, Dr. Louis Thomason Payne was born at Jasper April 20, 1939. From Walker County High he went on to Birmingham-Southern to graduate magna cum laude in 1961. Three years later he had his M. D. degree from the University of Alabama Medical College. After a rotating internship at the University Hospital he completed his OB-GYN residency. He practiced a year at Hartselle before affiliating with Drs. James M. Brown and Edgar M. Daly in Tuscaloosa.

This younger of the trio is married to the former Catherine Woodfin Murphy of Jasper and they have three children: Mary Wood, 8; Marion Walker, 3; and Catherine Thomason, 17 months.

CALORIES / 7 oz. Serving*

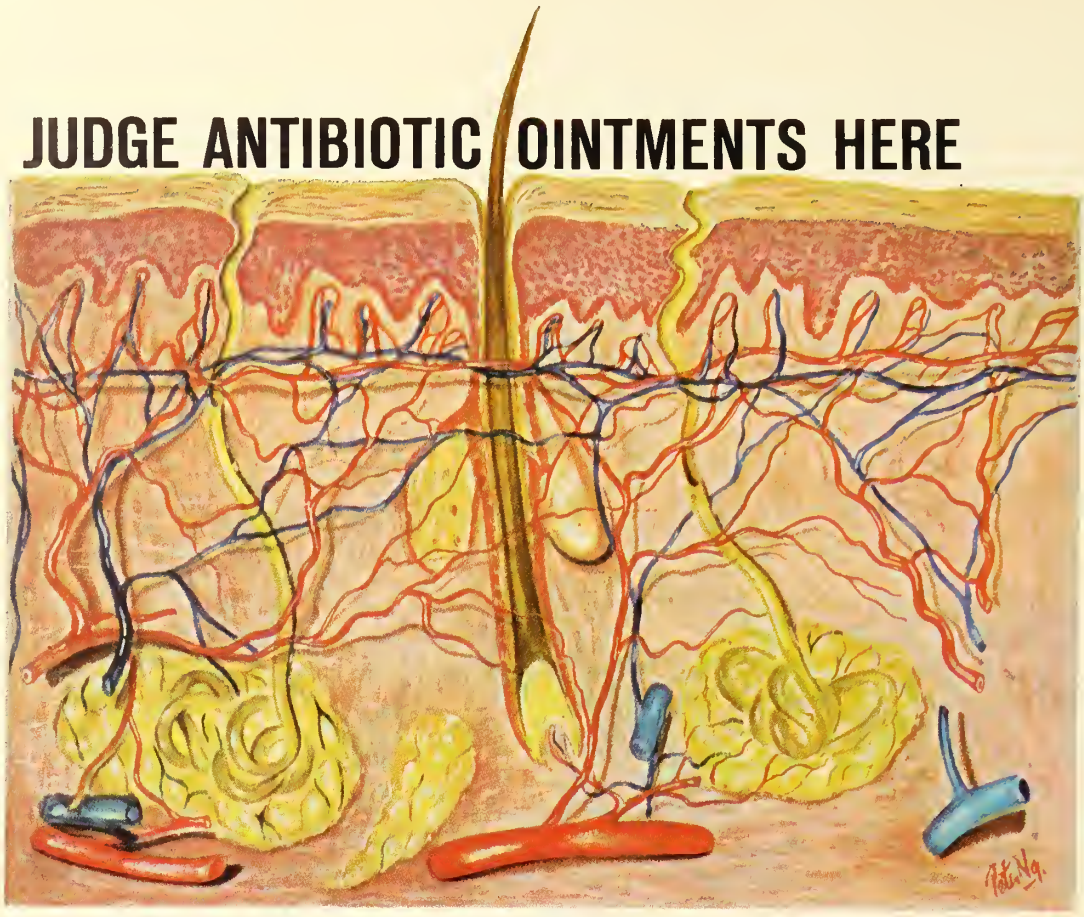
Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

The Month in Washington

From the Washington Office
American Medical Association

The Nixon Administration is drafting legislation that would eliminate the reason for physicians forming professional corporations for federal income tax advantages.

The legislation would remove the tax discrimination against self-employed physicians and other professionals in the tax treatment of retirement savings.

The legislation probably will be submitted to Congress next year as an Administration measure. The Administration intends to "remove the present discrimination between tax treatment of qualified plans for employees and qualified plans adopted by self-employed persons."

* * *

The Board on Medicine of the National Academy of Sciences urges wide use of three types of physician's assistants as the quickest way to relieve the national shortage of doctors.

In a special report, the Board called for the cooperation of the American Medical Association, the Association of American Medical Colleges and the government in developing physicians' assistants programs.

The AMA has been advocating use of physicians' assistants for some time.

The three types of assistants recommended by the NAS Board were:

1) Physician's associate—the most highly trained type; would be qualified to do work that involves some independent medical judgment; under the physician's supervision, he could in some cases make a diagnosis and perform therapy, with the range of his responsibilities increasing as he develops new skills on the job.

2) Specialized assistant—would be highly skilled in one type of clinical specialty or procedure within a specialty (such as the operation of a renal dialysis unit); would receive most of his training from a physician specialist.

3) Non-specialized assistant—would be to medicine what the practical nurse is to nursing; could receive much of his training on the job.

As the AMA has been doing, the Board cautioned against the premature enactment of licensing laws that would establish rigid job qualifications before the full potential usefulness of the assistants had been determined. The Board report recommended a system of registration that would permit physicians to employ assistants who had completed an approved program or otherwise established their qualifications.

Possession of a high school diploma should be an adequate prerequisite for training to become physician's assistants, according to the NAS Board. It suggested varying amounts of education, clinical experience, and on-the-job training for the three types of assistants. For physician's associates, it recommended the equivalent of two years of professional-level classroom and clinical work.

Instruction should cover the basic sciences underlying medical practice, and clinical training should be "of essentially the same type and degree as that given medical students." Medical corpsmen, about 30,000 of whom are discharged from the military services each year, and other medical workers who enter the training program should be allowed credit for the clinical knowledge they already have acquired.

* * *

The AMA opposes establishment of a national formulary that could restrict the prescribing practices of physicians with respect to federally supported medical programs.

In a letter to Sen. Russell B. Long (D., La.),

chairman of the Senate Finance Committee, which was considering such legislation, Dr. Ernest B. Howard, executive vice president of the AMA, said:

"The American Medical Association, representing approximately 180,000 active private practitioners of medicine in America, is opposed to a proposal that would interfere with the professional judgment and responsibilities of physicians. The proposed amendment, which would give a Federal Formulary Committee the authority to *exclude* from the Formulary (and therefore from payment) any drug which it considers unnecessary is, in our opinion, just such an infringement upon the professional judgment of practicing physicians.

"The amendment would provide the Formulary Committee with authority to publish prescribing information about each drug listed. Adequate prescribing information to assist physicians in selecting the most rational course of therapy is available through a variety of acceptable sources. The proposed additional information is not only unnecessary but undesirable since physicians would be unable to deviate from that standard regardless of a particular patient's circumstances without facing the risk of malpractice liability.

"Further, the amendment would require that a physician who desires to prescribe the product of a particular manufacturer with which he had experience and confidence could do so only by writing in his own handwriting the established name of the drug again and the name of the preferred manufacturer. We disagree with this practice limiting the authority of the physician to prescribe the drug of his choice. Our governing body, the AMA House of Delegates, has stated and reaffirmed on many occasions that physicians should be free to use either the generic (established) or brand name in writing prescriptions.

"In addition, the proposed amendment would have the Formulary Committee institute inspections, sample examinations and scientific review of drug products to be listed by the name of the supplier or the brand name. This task of the committee seems to be beyond its capability, particularly since it is constituted only on a part-time basis . . .

"We have said many times that we want our patients to receive high-quality drugs at the lowest possible cost. We continue in this position, more strongly than ever. But, we firmly believe that the creation of a national formulary would not bring about a more economical provision of drugs under programs established within the Department of Health, Education, and Welfare, nor would it enhance the quality of these drugs."

* * *

The AMA support a Senate-approved bill that would expand Federal family planning services and population research activities.

In a statement submitted to the House Subcommittee on Public Health and Welfare, the AMA said it believes the establishment of an Office of Population Affairs under a deputy assistant secretary in the Department of Health, Education, and Welfare is highly desirable. The Office would make formula or special project grants relating to population and family planning; administer population and family planning research; act as a clearing house on domestic and international population family planning programs; provide liaison with other federal agencies; and support training for manpower in these programs.

The bill (S. 2108) also would authorize special projects for family planning services, formula grants for family planning, training and research grants, and grants for the construction and operation of population research centers.

The AMA said that there is an urgent need for a greatly expanded program of population research, as authorized by the legislation.

* * *

(Continued on Page 278)

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

His wife has a lot of different menopausal symptoms, but only a few really irritate *him*. Her hot flashes, her vertigo, her palpitations—that's *her* problem. What really bothers him is her nervousness, her irritability and her excessive anxiety, often expressed by endless "book-shuffling, chain-smoking, reading-lamp" insomnia!

Menrium takes care of hot flashes, vertigo, palpitations in most menopausal women. Menrium provides the well-known antianxiety action of chlordiazepoxide (Librium®) and water-soluble esterified estrogens. It therefore relieves more symptoms than either component separately. It takes care of the vasomotor symptoms as well as the emotional symptoms. This means the symptoms that bother his wife most. And the symptoms that irritate him most.

So, to help them both get through *her* menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

(Continued from Page 274)

Five Republican senators have introduced legislation that would establish a four-year Federal program of family physician scholarships and fellowships to medical students and graduates who agree to practice in physician-shortage areas or to serve migratory agricultural workers.

For the first year, about 500 scholarships not to exceed $5,000 and 200 fellowships would be offered at a cost of $4.5 billion. The program would be expanded each year until by the fourth year 1,000 scholarships and 500 fellowships would be authorized for students and graduates agreeing to practice in isolated rural areas, migrant areas, city ghettos and Indian reservations with a shortage of physicians.

For each year of a scholarship, one year of service would be required. No additional service would be required under the fellowship part of the program.

Sen. George W. Murphy (R., Calif.) was chief sponsor of the legislation (S. 4208). Co-sponsors were Sens. Peter H. Dominick (R., Colo.), Jacob K. Javits (R., N. Y.), Winston L. Prouty (R., Vt.) and William B. Saxbe (R., Ohio).

AMA To Hold Boston Convention

The 24th Clinical Convention of the American Medical Association will be held Nov. 29-Dec. 2 in Boston, Mass.

Some 7,500 physicians, guests, medical students, residents, nurses, other allied health professionals and industrial and scientific exhibitors are expected to attend.

"This year's clinical convention reflects the growing needs of the busy practicing physician," declared Charles D. Bussey, M. D., Dallas, Tex., chairman of the AMA's Council on Scientific Assembly.

"A scientific program has been prepared to serve and interest both the general practitioner and the specialist. Motion pictures, courses, lectures, round table discussions and scientific and industrial exhibits will combine to further their postgraduate and continuing education."

The program for the convention, under the supervision of Claude E. Welch, M. D., Boston, program chairman, has been planned by the Greater Boston medical community. This includes three medical schools, more than 30 major hospitals and some 9,000 physicians. Many of the panel moderators and program participants are Bostonians.

However, the lecturers also will represent a cross-section of the entire United States. Speakers will come from more than two dozen different medical centers elsewhere in the nation, including Houston, Seattle, Baltimore, Washington, New Orleans, Hershey, Pa., Burlington, Vt., Nashville, Tenn., Portland, Me., San Diego, San Francisco, La Jolla, Providence, R. I., Minneapolis, Ann Arbor, Mich., New Haven, Conn., Brooklyn, N. Y., Lackland A. F. Base, Tex., Richmond, Va., Philadelphia, Winston-Salem, N. C., Buffalo, N. Y., Bethesda, Md., and Madison, Wis.

A listing of subject headings for the general scientific sessions gives an overall picture of the wide range of topics offered. Some of them are:

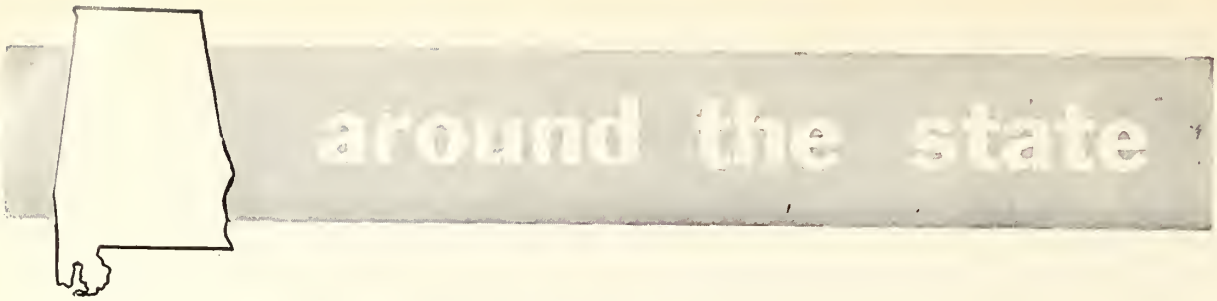
"Surgery of the Gastrointestinal Tract," "Coronary Heart Disease—One Team's Approach," "Applied Genetics," "Problems in Pediatric Surgery," "Pollution and the Physician," "The Automobile Accident—the First Hours," "Drug Dependence—Causes, Recognition, Management, and Prevention," "Medical Practice in the Future."

Other subjects include "Clinical Immunology," "Clinical Gynecology," "Renal Failure," "Adolescents' Medical Care," "Present Day Problems in Obstetrics," "Cerebral-Vascular Disease: New Concepts," "Cancer Chemotherapy (drug treatment)."

Further information is available from the AMA Council on Medical Service, 535 N. Dearborn St., Chicago, Ill., 60610.

Alabama's first Medical Practice Act, adopted in 1819, spoke out against those practicing medicine who "shall bleed, apply a blister of Spanish flies, administer calomel, opium or laudanum."

BLUE CROSS-BLUE SHIELD OF ALABAMA



Vital Statistics

NEW MEMBERS

Colbert County

Weber, Alvin Julian III, b 36, mc Univ. of Tennessee 62, recip. Tenn. 69, 907 Woodward Avenue, Muscle Shoals, Alabama 35660

Cullman County

Crocker, Francis Lauren, Jr., b 38, mc Alabama 63, sb 64, 404 E. Arnold Street, Cullman, Alabama 35055 S

Welch, Elbert Sylvester, b 21, mc Maryland 49, sb 50, P. O. Box 295, Hanceville, Alabama 35077 GP

Fayette County

Seay, John David, b 42, mc Alabama 69, recip. NBME 70, P. O. Box 429, Fayette, Alabama 35555

Madison County

Horn, Louis Giles III, b 38, mc Vanderbilt 63, NBME 70, 719 Franklin Street, Huntsville, Alabama 35801 Or

Hornsby, Robert Jerald, b 36, mc Univ. of Tennessee 61, recip. Miss. 69, 719 Franklin Street, Huntsville, Alabama 35801. Or

Sumter County

Gegan, Edward Lester, b 27, mc Univ. of Tennessee 58, recip. Tenn. 69, Box 781, Livingston, Alabama 35470. GP-S

MEMBERS DECEASED

Jefferson County

Viar, William Nathan, Birmingham, Alabama ..... Deceased 8/11/70

Mobile County

Buckner, Frank Ingram, Jr., Mobile, Alabama ..... Deceased 8/17/70

Joseph, Raymond Francis, Mobile, Alabama ..... Deceased 8/7/70

MEMBERS REMOVED

Calhoun County

Fagan, Philip John, Anniston, Alabama ..... Moved from State

CHANGES OF ADDRESS

Baldwin County

Hamilton, Longstreet Cavett, present Fairhope to P. O. Drawer S, Fairhope, Alabama 36532

Jefferson County

Gay, Madison W., present Birmingham to 1919 S. 7th Ave., Birmingham, Alabama 35233

Gibbs, Sydney R., present Fairfield to 705 Memorial Drive, Bessemer, Alabama 35202

Glover, Lester B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Graham, Stanley E., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Guffin, Gilbert T., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Harsh, Griffith R., III., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Hazelrig, Cooper G., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

(Continued on Page 285)

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Roche
announces

Efudex®

(fluorouracil)
cream/solution

for the treatment of solar/actinic keratoses... a topical alternative to conventional therapy

Fluorouracil—the Roche contribution

In 1962, Roche Laboratories introduced Fluorouracil Roche® (5-fluorouracil). Early clinical work with this drug suggested that it possessed a selective cytotoxic activity when applied topically to certain kinds of lesions. Based on this work and years of clinical trials, a standardized form of topical fluorouracil can now be recommended for treatment of multiple solar or actinic keratoses.

Efudex®(fluorouracil)—a new alternative to conventional therapy

Efudex presents the physician with a topical alternative to surgery in the treatment of solar or actinic keratoses. It is effective, comparatively inexpensive and especially well-suited for treatment of multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

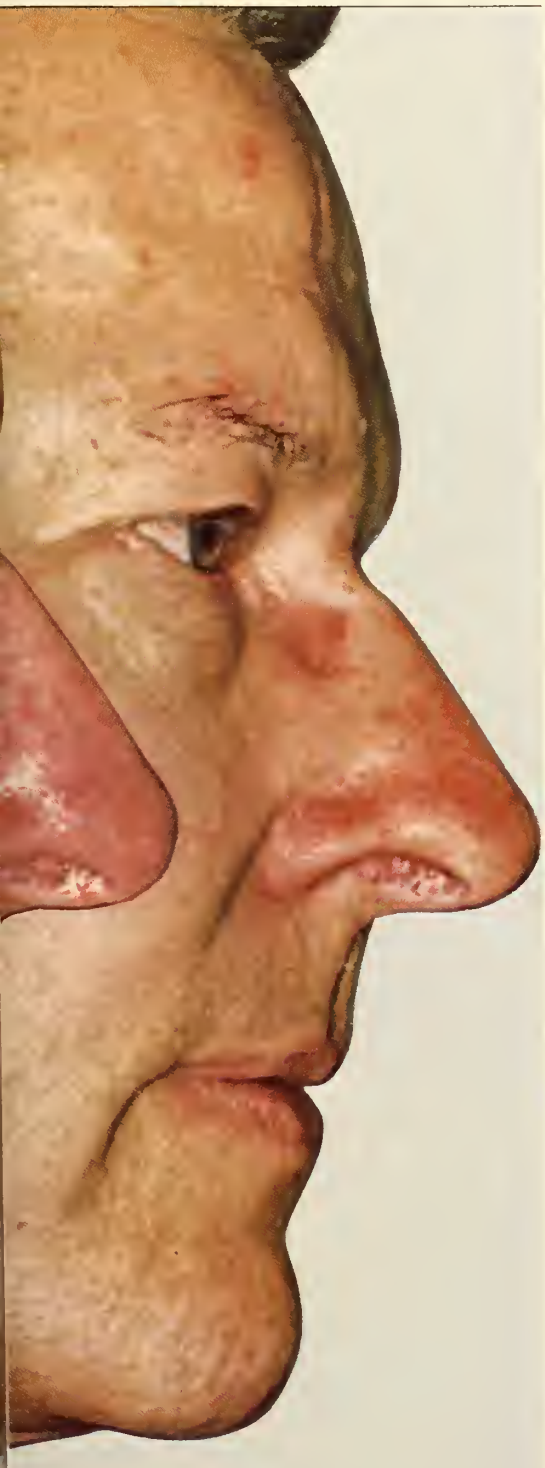
Highly effective on first and later applications

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When lesions did recur or new ones appeared, repeated courses of Efudex therapy proved effective.*

1/22/68—Treatment with 5% 5-FU cream commences. Patient K.L. showing widespread but mild solar keratoses (also known as actinic keratoses).

2/68—After 11 days of treatment. ythema is seen at site of keratoses. In dition, numerous lesions not apparent or to therapy have become manifest sharply defined reactions. Intervening n, also treated, shows no response to rapy.

19/69—One year after cessation of rapy. Skin appears clear with no evi- nce of scarring. Examination reveals k of recurrence or the formation of w lesions.



Predictable sequence of therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of the keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two to three months before gradually receding.

Selective—with a high degree of safety

Despite the temporary unsightliness and discomfort of the inflammatory episode, Efudex is, in general, more readily tolerated than surgery. Clinical work shows the intense inflammatory response to be limited to the area of the lesion. Normal skin is not similarly affected. Another measure of Efudex safety: systemic absorption of topical fluorouracil was insignificant, indicating a low risk of systemic toxicity.*

Two strengths—two convenient dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, there are two important considerations. First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

2% and 5% Solutions; 5% Cream Applied twice daily—resolves solar or actinic keratoses.

new Efudex® (fluorouracil) cream/solution

For full prescribing information, please see the following page.

Roche introduces

Efudex®

(fluorouracil) cream/solution the new standardized topical for solar/actinic keratoses

Description: Efudex solutions and cream are topical preparations containing the fluorinated pyrimidine 5-fluorouracil, an antineoplastic antimetabolite.

Efudex Solution consists of 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris-(hydroxymethyl) aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream contains 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Actions: There is evidence that the metabolism of fluorouracil in the anabolic pathway blocks the methylation reaction of deoxyuridylic acid to thymidylic acid. In this fashion fluorouracil interferes with the synthesis of deoxyribonucleic acid (DNA) and to a lesser extent inhibits the formation of ribonucleic acid (RNA). Since DNA and RNA are essential for cell division and growth, the effect of fluorouracil may be to create a thymine deficiency which provokes unbalanced growth and death of the cell. The effects of DNA and RNA deprivation are most marked on those cells which grow more rapidly and which take up fluorouracil at a more rapid pace. The catabolic metabolism of fluorouracil results in degradative products (*e.g.*, CO_2, urea, α-fluoro-β-alanine) which are inactive.

Studies in man with topical application of ^{14}C-labeled Efudex demonstrated insignificant absorption as measured by ^{14}C content of plasma, urine and respiratory CO_2.

Indications: Efudex is recommended for the topical treatment of multiple actinic or solar keratoses.

Contraindications: Efudex is contraindicated in patients with known hypersensitivity to any of its components.

Warnings: If an occlusive dressing is used, there may be an increase in the incidence of inflammatory reactions in the adjacent normal skin.

Prolonged exposure to ultraviolet rays should be avoided while under treatment with Efudex because the intensity of the reaction may be increased.

Usage in Pregnancy: Safety for use in pregnancy has not been established.

Precautions: If Efudex is applied with the fingers, the hands should be washed immediately afterward. Efudex should be applied with care near the eyes, nose and mouth. To rule out the presence of a frank neoplasm, a biopsy should be made of those areas failing to respond to treatment or recurring after treatment.

Adverse Reactions: The most frequently encountered local reactions were pain, pruritus, hyperpigmentation and burning at the site of application. Other local reactions included dermatitis, scarring, soreness and tenderness.

Also reported were insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity and lacrimation.

Laboratory abnormalities reported were leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Efudex should be applied twice daily with a nonmetal applicator or suitable glove in an amount of the solution or cream sufficient to cover the lesion. When Efudex is applied to a lesion, a response occurs with the following sequence erythema, usually followed by vesiculation, erosion, ulceration, necrosis and epithelization. The lower frequency and intensity of activity in adjacent normal skin indicate a selective cytotoxic property. Medication should be continued until the inflammatory reaction reaches the erosion, necrosis and ulceration stage, at which time use of the drug should be terminated. The usual duration of therapy is from 2 to 4 weeks. Complete healing of the lesion may not be evident for 1 to 2 months following cessation of Efudex therapy.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Clinical Studies: The effectiveness of the three preparations as determined by complete involution of solar keratoses was: 2% Solution, 77% of 282 lesions; 5% Solution, 88% of 202 lesions; and 5% Cream, 85% of 189 lesions. In those lesions where complete involution followed treatment, the rate of possible recurrences observed clinically at periods up to 12 months or more was: 2% Solution, 4.6% of 218 lesions; 5% Solution, 1.7% of 177 lesions; and 5% Cream, 5.6% of 160 lesions. Because of the toxic potential of fluorouracil, some physicians preferred to use the 2% solution when large areas were to be treated. Approximately 30% of the lesions required treatment for two weeks or less; approximately 78% required four weeks or less for adequate treatment.

ROCHE Roche LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

(Continued from Page 280)

Hazigeorgiou, George P., present Birmingham to 2160 Highland Ave. S., Birmingham, Alabama 35205

Henderson, Ronald E., present Birmingham to 2016 10th Ave. S., Birmingham, Alabama 35205

Hofammann, Karl E. Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Holley, Howard L., present Birmingham to 1919 S. 7th Ave., Birmingham, Alabama 35233

Hudson, Bryant H. III., present Birmingham to 1540 Walnut Hill Circle, Birmingham, Alabama 35234

Johnson, Bruce K., present Birmingham to 2930 12th Ave. N., Birmingham, Alabama 35234

Landers, Bluitt L., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Lauderdale, Robert O., Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Lawaczeck, Elmar M. J., present Birmingham to 101 Medical Arts Building, Birmingham, Alabama 35205

Levine, Myron A., present Birmingham to 1033 S. 22nd Street, Birmingham, Alabama 35205

Linder, Hugh M. C., present Birmingham to 201 Medical Arts Building, Birmingham, Alabama 35205

Longino, Luther A., present Birmingham to 1919 S. 7th Ave., Birmingham, Alabama 35233

Lorincz, Andrew E., present Birmingham to 1720 7th Ave. S., Birmingham, Alabama 35233

Lyons, James A. Jr., present Indianapolis, Indiana to 1202 13th Ave. S.E., Decatur, Alabama 35601

Mathews, Robert D., present Birmingham to 1615 N. 25th Street, Birmingham, Alabama 35234

McAuley, Malcolm D., present Birmingham to 1069 Forest Brook Drive, Birmingham, Alabama 35226

McCaslin, Dan L., present Birmingham to 7638 Hope Farm Road, Fort Wayne, Indiana 46805

McDaniel, Millie M., present Birmingham to 210 Raymond Drive, Birmingham, Alabama 35209

McDonald, H. Jack, present Birmingham to 4616 Montevallo Rd., Birmingham, Alabama 35210

McElroy, James B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

McRae, J. Finley, Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Morgan, James M., Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Norman, Joe R., present Birmingham to 2500 North State St., Jackson, Mississippi 39216

Norman, Patricia, present Birmingham to 2701 10th Ave. S., Birmingham, Alabama 35205

Oliver, Ernest B., present Birmingham to 801 Princeton Ave., S.W., Birmingham, Alabama 35211

Peacock, Thomas H. Jr., present Alexandria to 15 Clarndon Road, Birmingham, Alabama 35213

Peterson, Edward J., present Birmingham to P. O. Box 31011, Birmingham, Alabama 35222

Pigford, Malcolm L., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

(Continued from Page 285)

Preston, Roy T. Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Ramsey, Joseph H., present Birmingham to 1529 Ryecroft Road, Birmingham, Alabama 35234

Randall, Fay M., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Risman, George Carl, present Birmingham to 2715 18th Place South, Birmingham, Alabama 35209

Romine, William O., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Ronderos, Alvaro D., present Birmingham to 1529 N. 25th Street, Birmingham, Alabama 35234

Rudd, George E., present Pinson to P. O. Box 400, Pinson, Alabama 35126

Russakoff, A. David, present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Ryan, Robert T. Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Sampson, Larry W., present Birmingham to 8010 2nd Ave. S., Birmingham, Alabama 35206

Smelo, Leon S., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Smith, Chandler H., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Smith, G. Hampton, Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Smith, Lamar M. C. Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Smith, Thomas L., Jr., present Birmingham to 9480 Parkway East, Birmingham, Alabama 35215

Sperling, David, present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Spruell, William H., present Birmingham to 1529 N. 25th Street, Birmingham, Alabama 35234

Stabler, A. L., present Birmingham to 2845 Stratford Road, Birmingham, Alabama 35213

Stephens, Albert B. Jr., present Birmingham to 3015 S. 7th Avenue, Birmingham, Alabama 35205

Stevenson, Edward W., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Stewart, Roddie L., present Birmingham to Riverside, Alabama 35135

Stewart, Vera B., present Birmingham to 2737 Highland Avenue S., Birmingham, Alabama 35205

Sweeney, Donald B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Teague, Eldred B., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Thomas, E. Lamar, present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Thomas, Henry Duke, present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Thung, Nalda S., present Birmingham to 1919 S. 7th Ave., Birmingham, Alabama 35233

Tidwell, Owen K., present Birmingham to 1-4 Medical Arts Building, Birmingham, Alabama 35205

Truss, C. Orian, present Birmingham to 2614 Highland Avenue S., Birmingham, Alabama 35205

Vaughn, Henry M., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

(Continued on Page 288)

in cardiac edema

Dyazide®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

SK&F

Smith Kline & French Laboratories

(Continued from Page 286)

Warrick, George W., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Wells, Clay N., present Birmingham to 2991 Shasta Road, Berkley, California 94708

White, Walter M., present Birmingham to 551 Huffman Road, Birmingham, Alabama 35215

Whitehurst, Walter R., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Whitman, Marcus, Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Wilhite, Wilson C., Jr., present Birmingham to 4300 Kennesaw Drive, Mountain Brook, Birmingham, Alabama 35213

Williams, J. Hayes, present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Williams, James R., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Wilson, Joseph D., present Birmingham to 3815 Forest Glenn Drive, Birmingham, Alabama 35213

Wilson, Thomas, A.S., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Woolley, Andrew P., Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Yoe, Robert H., Jr., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Young, Lewis S., present Bessemer to 705 Memorial Drive, Bessemer, Alabama 35020

Zenger, George H., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213

Lawrence County

Taylor, Woodie R., present Town Creek to 1906 Holiday Ct., Florence, Alabama 35630

Limestone County

Karrh, Bruce Wakefield, present Athens to 3301 Ashdown Road, Richmond, Virginia 23235

Madison County

Brown, John A., Jr., present Huntsville to P. O. Box 40, Hamilton, Alabama 35570

Sutherland, Hugh Lewis, Jr., present Memphis, Tennessee to 100 St. Clair Avenue, Huntsville, Alabama 35801

Marengo County

Fitz-Gerald, Maurice J., present Demopolis to Box 774, Demopolis, Alabama 36732

Perret, Norbert E., Jr., present Demopolis to Box 774, Demopolis, Alabama 36732

Marion County

Johnson, William P., present Hamilton to 824-1st S., New Ulm, Minnesota 56073

Mobile County

Allgood, Homer W., Jr., present Mobile to 1703 W. Avenue E., Mule Shoe, Texas 79347

Berry, Sidney R., present Mobile to Jackson, Mississippi

Boger, Robert M., present Mobile to 2256 DeLean Ave., Mobile, Alabama 36607

Hinton, John L., present Mobile to 120 Louiselle Street, Mobile, Alabama 36607

Mortensen, Andreas V., present Mobile to 120 Louiselle Street, Mobile, Alabama 36607

Rutherford, Charles L., Jr., present Mobile to 1720 Center Street, Mobile, Alabama 36604

Sellers, David Frederick, present Mobile to 10 Danner Circle, Spanish Fort Estates, Daphne, Alabama 36526

Taylor, John S., present Mobile to 1563 Springhill Avenue, Mobile, Alabama 36604

(Continued on Page 291)

The girth control pill

Tepanil® Ten-tab

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur with relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastraintestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

(Continued from Page 288)

Montgomery County

McRae, James D., present Montgomery to 2221 Rosemont Court, Montgomery, Alabama 36111

Morgan County

Bowers, David E., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Brown, William A., Jr., present Hartselle to P. O. Box 965, Hartselle, Alabama 35640

Evans, Owen B., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Galloway, George W., Jr., present Hartselle to 2305 Springdale Road, Decatur, Alabama 35601

Howell, Charles B., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Jackson, Laurence S., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

McCain, Paul P., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Nash, James Carroll, Jr., present Decatur to Searcy State Hospital, Mt. Vernon, Alabama 36560

Pitt, Charles K., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Pitt, McCoy B., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Tune, Leon J., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Walker, William A., present Decatur to 13th at Medical Drive, Decatur, Alabama 35601

Randolph County

Everett, Gerald W., present Wedowee to P. O. Box 188, Woodland, Alabama 36280

Tallapoosa County

Hodnett, Cary G., present Alexander City to 816 Beech Street, Mountain Brook, Birmingham, Alabama 35213

Tuscaloosa County

Jordan, Otis L., present Tuscaloosa to P. O. Box 64, Tuscaloosa, Alabama 35401

Partlow, Rufus C., present Tuscaloosa to 35 Clarke Street, Lexington, Massachusetts 02173

Walker County

Green, Anderson C., present Sumiton to P. O. Box G, Ashville, Alabama 35953

NEW TELEPHONE NUMBERS

Brown, Andrew M., Gadsden	547-4971
Hilbert, John F., Dothan	794-2675
Amato, Simone J., Birmingham	591-2534
Bennett, Austin LeGrande, Birmingham	595-3439
Boname, John R., Birmingham	591-2534
Brown, Howard Dale, Birmingham	591-2304
Bruhn, John R., Birmingham	591-2304
Brummett, Chester C., Birmingham	591-2534
Burrett, John B., Birmingham	591-2843
Casten, Gus G., Birmingham	591-2706
Clayton, Orville W., Birmingham	595-3439
Comer, John F., Birmingham	591-2516
Cord, Richard H., Birmingham	592-3706

James Alvis Becton, M. D., Noted Psychiatrist Dies

James Alvis Becton, M. D., founder of Hill Crest Hospital, Birmingham, a life member of the Medical Association of the State of Alabama and a member of MASA's 50-Year Club, is dead in his 80th year.

Born Nov. 15, 1890, in middle Tennessee, he died July 16, 1970, after a short illness. Survivors include his widow, Mrs. Adelle Brown Becton; two daughters, Mrs. Jean Becton Ward and Mrs. Ruth Becton Folsom; and four grandchildren, James Keene Ward, Jr., Hardy Becton Ward, Pamela Jean Ward, and Ivy Folsom Simpson.

INDEX TO ADVERTISERS

Arch Laboratories 221

Becton, Dickinson and Company 233, 234
Bio-Dynamics 251, 252
Blue Cross-Blue Shield 279
The Bradley Center 275
Breon Laboratories 237
Burroughs Wellcome 272

Campbell Soup 271
The Carlton Corporation 221

Guest House Motel 269

Highland Hospital 292
Hynson, Westcott & Dunning 217

Lederle Laboratories ..... 219, 266, 267, 3rd Cover
Eli Lilly & Company ..... 1st Cover, 238

Merck, Sharp & Dohme 258, 259, 260
Wm. S. Merrell ..... 2nd Cover

National Drug 261, 262, 289, 290

Wm. P. Poythress 281

A. H. Robins 222, 223, 224
Roche Laboratories ..... 276, 277, 282, 283, 284, 4th Cover

G. D. Searle 254, 255
Smith Kline & French 230, 231

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

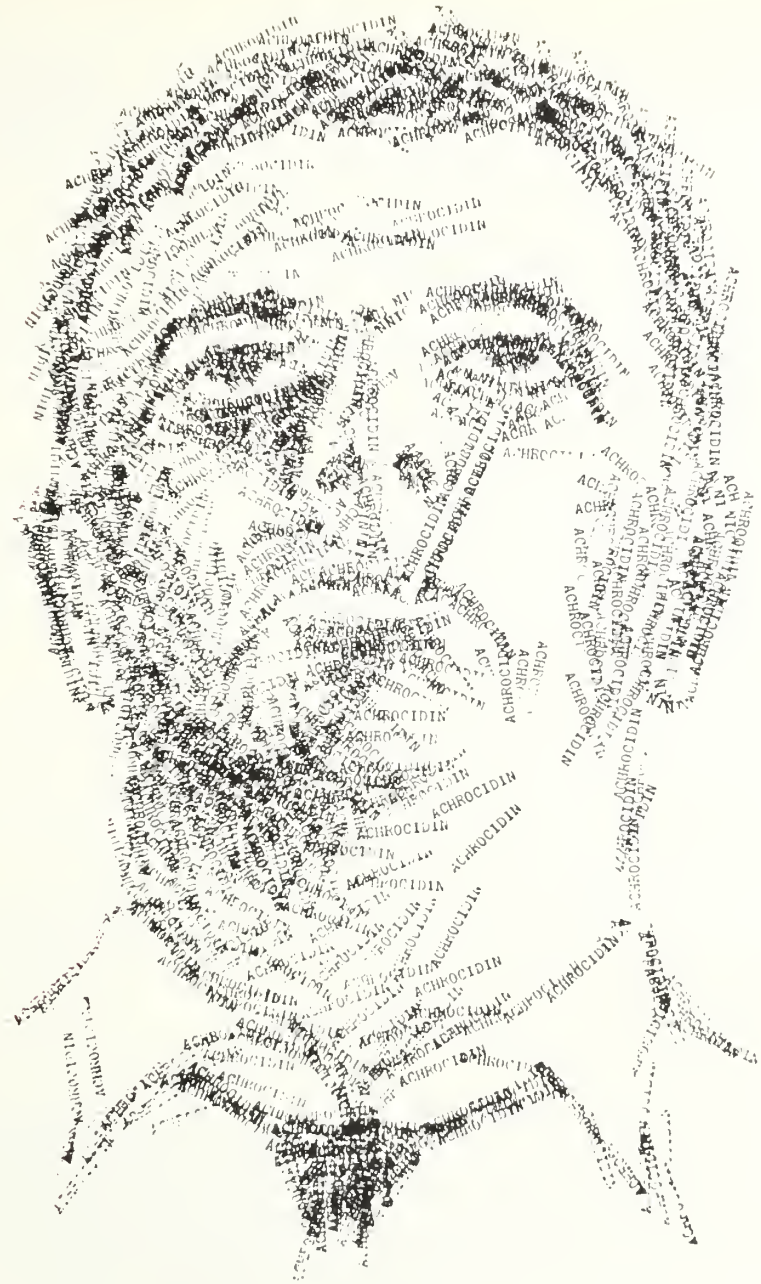
Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201



Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

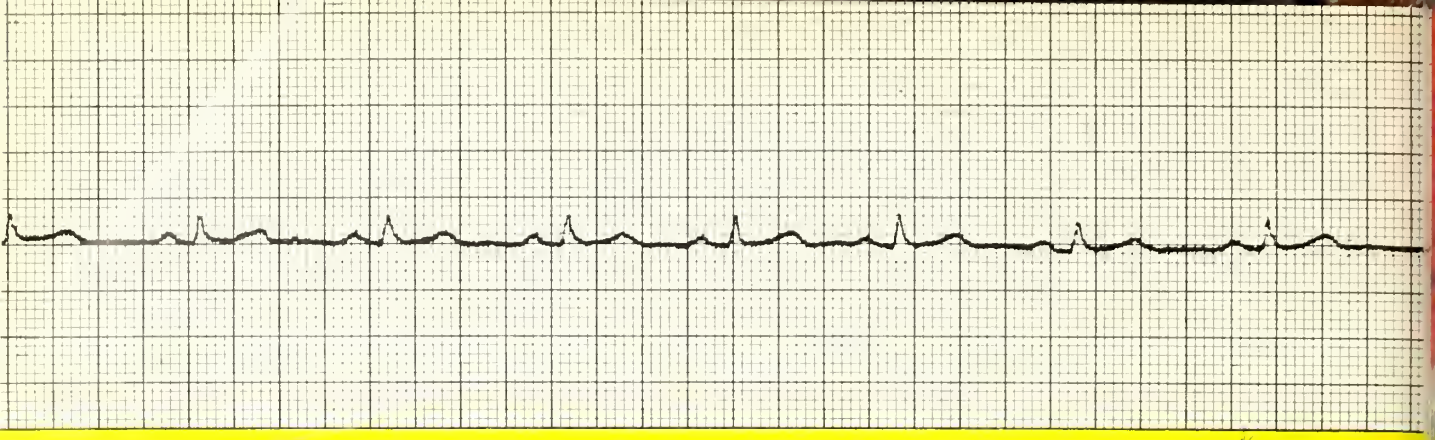
Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

535-9



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

JOURNAL of the Medical Association of the State of ALABAMA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

IN THIS ISSUE

CASE REPORT: Multiloculated Lymphangiomatous Cyst of the Ileum 317

Blood Gas, Fluid and Osmotic Monitoring in the Coronary-Pulmonary Care Unit . . 321

Locality Rule 329

Now available for your prescribing needs

Cordran Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)
Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206
000171
Lilly

Medical Office
Francis A. Countway Lib. of
Medicine
10 Shattuck St.
Boston, Massachusetts 02115

NOVEMBER 1970

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acut care facilities. A professional medical staff supervise all recuperative care under the direct orders of each pa tient's personal physician. Room rates are nominal – about one-half the cost of general hospitals. And there a growing list of insurance companies that already provid coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community health care system. Get to know the Medicenter soon. You visit or inquiry is welcome anytime.

MEDICENTER
OF AMERICA
*
A Nice Place to Get Well

Medicenter of America / Mobile, Alabama 36607

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
30 NOV 1970

LACTINEX®

LACTINEX®

TABLETS &
GRANULES

■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

Introduced to help reestablish the normal physiology of the intestinal tract in gastrointestinal disturbances[1], particularly diarrheas (including those resulting from antibiotic therapy), Lactinex is also useful for reestablishing the flora following bowel surgery, infant colic, mucous colitis, foul-smelling stools, pruritus ani, flatulence and hives.[2,3,4,5,6]

Lactinex contains a viable mixed culture of both *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(#LX06)

LX

References:
(1) Siver, R. H.: CMD, 21:109, September 1954. (2) Frykman, H. H.: Minn. Med., 38:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., 51:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., 15:15-16, October 1965. (5) Weekes, D. J.: NY State Jour. Med., 58:2672-2673, August 1958. (6) Ellis, S. and Spratt, J. S.: JOUR. AMER. GER. SOC., 18:410-415, May 1970.

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • November, 1970 • No. 5

Office of Publication

19 So. Jackson St. .... Montgomery, Ala. 36104

Subscription Price ..... $5.00 Per Year

$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief

William L. Smith, M. D. ..... Montgomery

Managing Editor

L. P. Patterson ..... Montgomery

Assistant Managing Editor

Mary Nell Williford ..... Montgomery

Publications Committee

Archie E. Thomas, M. D., Chairman .. Montgomery
C. Kermit Pitt, M. D. ..... Decatur
H. H. Hutchinson, M. D. ..... Montgomery
William L. Smith, M. D. ..... Montgomery
L. P. Patterson ..... Montgomery

Officers of the Association

President

S. Buford Word, M. D. ..... Birmingham

President-Elect

A. E. Thomas, M. D. ..... Montgomery

Vice-Presidents

F. M. Phillippi, Jr., M. D. ..... Brewton
J. E. Cameron, M. D. ..... Alexander City
O. Emfinger, M. D. ..... Union Springs
Wood S. Herren, M. D. ..... Birmingham

Secretary-Treasurer

William L. Smith, M. D. ..... Montgomery

Executive Director

L. P. Patterson ..... Montgomery

The State Board of Censors

John M. Chenault, M. D., Chmn. ..... Decatur
J. P. Collier, M. D. ..... Tuscaloosa
Paul W. Burleson, M. D. ..... Birmingham
L. L. Hill, M. D. ..... Montgomery
M. Vaun Adams, M. D. ..... Mobile
J. D. Bush, M. D. ..... Gadsden
E. L. Strandell, M. D. ..... Brewton
John W. Davis, Jr., M. D. ..... Montgomery
J. Garber Galbraith, M. D. ..... Birmingham
H. G. Hodo, M. D. ..... Fayette

State Health Officer

Ira L. Myers, M. D. ..... Montgomery

Delegates and Alternates to the American Medical Association

(Terms expiring December 31 of year shown.)

1970

Delegate—E. Bryce Robinson, Jr., M. D., .. Fairfield
Alternate—W. E. White ..... Anniston

1971

Delegate—M. Vaun Adams, M. D. ..... Mobile
Alternate—E. L. McCafferty, Jr., M. D. .... Mobile
Delegate—P. W. Burleson, M. D. ..... Birmingham
Alternate—Robert Parker, M. D. ..... Montgomery

1972

Delegate—E. Bryce Robinson, Jr., M. D. .. Fairfield
Alternate—W. E. White ..... Anniston

CONTENTS

The Woman's Auxiliary 301

Editorial Comment 303

The Modern Physician Has Reason For Thanksgiving 303

The Doctor May Leave That Worry To The Physician 306

Guest Editorial, The Ambient Air and Respiratory Diseases, William J. Tally, M. D. 306

Two of Nine Qualifying for 50-Year Club 310

Premature Mortality—What is the Answer?, A. M. Overbach, M. D. 311

Physician Placement Service in Alabama 314

Scientific Section 317

CASE REPORT: Multiloculated Lymphangiomatous Cyst of the Ileum, R. E. Vickery, M. D., Andalusia 317

Blood Gas, Fluid And Osmotic Monitoring in the Coronary-Pulmonary Care Unit, D. S. Tysinger, Jr., M. D., Dothan 321

Books of Interest to Doctors and Patients 324

Association Forum 329

Locality Rule, Rod Nachman, LL.B., Montgomery 329

Legal Page—Right Of Action For Injury To, Or Death Of A Woman Who Consented To Abortion 334

The Month In Washington 338

Fathers And Sons in Medicine 342

The Chenaults of Decatur—Three Generations 342

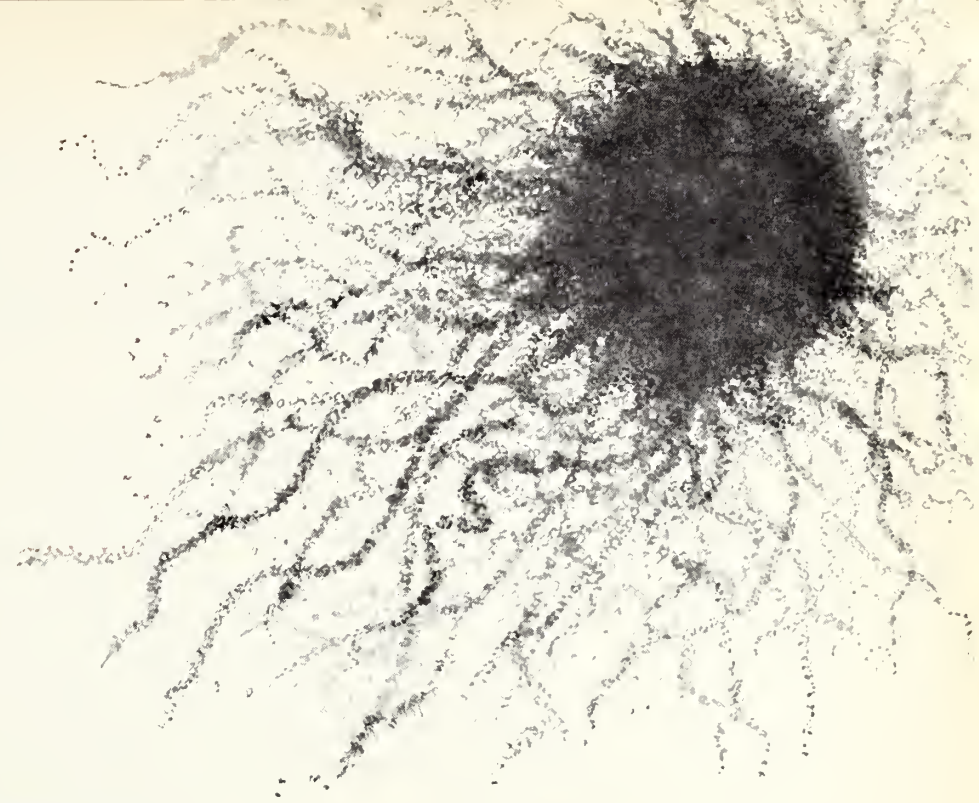
Hobbies to Fill A Doctor's Leisure 346

Bronzes at Home, Pictures Abroad For Hobby Fun 346

Around the State 348

Vital Statistics 348

Doctors Who Play With Fire (Their Favorite Recipes) 358



Corticosteroid therapy week after week.

then antibiotic therapy last week.

and monilial overgrowth this week.

For many patients on long-term corticosteroid therapy, the addition of oral antibiotic therapy may trigger monilial overgrowth in the intestine. When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

it doesn't let monilia begin where bacteria end.

Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 448-9

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select
Silain-Gel® Tablets:

when the patient prefers a liquid, select
Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

Roche announces

Efudex®

(fluorouracil) cream/solution

for the treatment of solar/actinic keratoses... a topical alternative to conventional therapy

1/22/68—Treatment with 5% 5-FU cream commences. Patient K.L. showing widespread but mild solar keratoses (also known as actinic keratoses).

Fluorouracil—the Roche contribution

In 1962, Roche Laboratories introduced Fluorouracil Roche® (5-fluorouracil). Early clinical work with this drug suggested that it possessed a selective cytotoxic activity when applied topically to certain kinds of lesions. Based on this work and years of clinical trials, a standardized form of topical fluorouracil can now be recommended for treatment of multiple solar or actinic keratoses.

Efudex®(fluorouracil)—a new alternative to conventional therapy

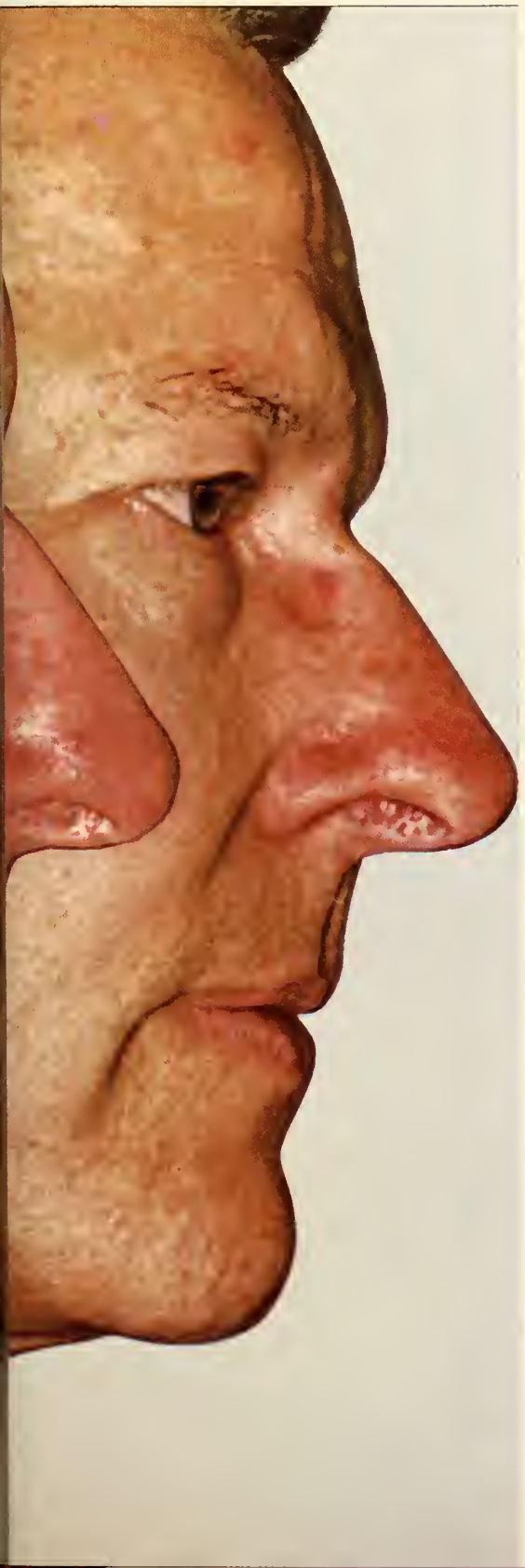
Efudex presents the physician with a topical alternative to surgery in the treatment of solar or actinic keratoses. It is effective, comparatively inexpensive and especially well-suited for treatment of multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective on first and later applications

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When lesions did recur or new ones appeared, repeated courses of Efudex therapy proved effective.*

/2/68—After 11 days of treatment. rythema is seen at site of keratoses. In ddition, numerous lesions not apparent rior to therapy have become manifest y sharply defined reactions. Intervening kin, also treated, shows no response to ierapy.

/19/69—One year after cessation of ierapy. Skin appears clear with no evi- ence of scarring. Examination reveals ack of recurrence or the formation of ew lesions.



Predictable sequence of therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of the keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two to three months before gradually receding.

Selective—with a high degree of safety

Despite the temporary unsightliness and discomfort of the inflammatory episode, Efudex is, in general, more readily tolerated than surgery. Clinical work shows the intense inflammatory response to be limited to the area of the lesion. Normal skin is not similarly affected. Another measure of Efudex safety: systemic absorption of topical fluorouracil was insignificant, indicating a low risk of systemic toxicity.*

Two strengths—two convenient dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, there are two important considerations. First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

2% and 5% Solutions; 5% Cream Applied twice daily—resolves solar or actinic keratoses.

new Efudex® (fluorouracil) cream/solution

For full prescribing information, please see the following page.

Roche introduces

Efudex®

(fluorouracil) cream/solution the new standardized topical for solar/actinic keratoses

Description: Efudex solutions and cream are topical preparations containing the fluorinated pyrimidine 5-fluorouracil, an antineoplastic antimetabolite.

Efudex Solution consists of 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris-(hydroxymethyl) aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream contains 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Actions: There is evidence that the metabolism of fluorouracil in the anabolic pathway blocks the methylation reaction of deoxyuridylic acid to thymidylic acid. In this fashion fluorouracil interferes with the synthesis of deoxyribonucleic acid (DNA) and to a lesser extent inhibits the formation of ribonucleic acid (RNA). Since DNA and RNA are essential for cell division and growth, the effect of fluorouracil may be to create a thymine deficiency which provokes unbalanced growth and death of the cell. The effects of DNA and RNA deprivation are most marked on those cells which grow more rapidly and which take up fluorouracil at a more rapid pace. The catabolic metabolism of fluorouracil results in degradative products (*e.g.*, CO_2, urea, α-fluoro-β-alanine) which are inactive.

Studies in man with topical application of ^{14}C-labeled Efudex demonstrated insignificant absorption as measured by ^{14}C content of plasma, urine and respiratory CO_2.

Indications: Efudex is recommended for the topical treatment of multiple actinic or solar keratoses.

Contraindications: Efudex is contraindicated in patients with known hypersensitivity to any of its components.

Warnings: If an occlusive dressing is used, there may be an increase in the incidence of inflammatory reactions in the adjacent normal skin.

Prolonged exposure to ultraviolet rays should be avoided while under treatment with Efudex because the intensity of the reaction may be increased.

Usage in Pregnancy: Safety for use in pregnancy has not been established.

Precautions: If Efudex is applied with the fingers, the hands should be washed immediately afterward. Efudex should be applied with care near the eyes, nose and mouth. To rule out the presence of a frank neoplasm, a biopsy should be made of those areas failing to respond to treatment or recurring after treatment.

Adverse Reactions: The most frequently encountered local reactions were pain, pruritus, hyperpigmentation and burning at the site of application. Other local reactions included dermatitis, scarring, soreness and tenderness.

Also reported were insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity and lacrimation.

Laboratory abnormalities reported were leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Efudex should be applied twice daily with a nonmetal applicator or suitable glove in an amount of the solution or cream sufficient to cover the lesion. When Efudex is applied to a lesion, a response occurs with the following sequence: erythema, usually followed by vesiculation, erosion, ulceration, necrosis and epithelization. The lower frequency and intensity of activity in adjacent normal skin indicate a selective cytotoxic property. Medication should be continued until the inflammatory reaction reaches the erosion, necrosis and ulceration stage, at which time use of the drug should be terminated. The usual duration of therapy is from 2 to 4 weeks. Complete healing of the lesion may not be evident for 1 to 2 months following cessation of Efudex therapy.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Clinical Studies: The effectiveness of the three preparations as determined by complete involution of solar keratoses was: 2% Solution, 77% of 282 lesions; 5% Solution, 88% of 202 lesions; and 5% Cream, 85% of 189 lesions. In those lesions where complete involution followed treatment, the rate of possible recurrences observed clinically at periods up to 12 months or more was: 2% Solution, 4.6% of 218 lesions; 5% Solution, 1.7% of 177 lesions; and 5% Cream, 5.6% of 160 lesions. Because of the toxic potential of fluorouracil, some physicians preferred to use the 2% solution when large areas were to be treated. Approximately 30% of the lesions required treatment for two weeks or less; approximately 78% required four weeks or less for adequate treatment.

ROCHE Roche LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

I am happy to report to you that the Fall Conference-Workshop held in Montgomery on October 7 & 8 was a huge success! Approximately 100 attended including State Officers, State Committee Chairmen, members and guests. The State Committee Chairmen presented their outlines for the year with great enthusiasm as each is well versed and vitally interested in her project. The response from the county auxiliary leaders was overwhelming which made my many months of preparing this program most worth while.

The presentation by Mr. A. Brooks Parker, Director, Tennessee Health Careers, was outstanding. The film, "The Health Team," which was filmed in Tennessee, and produced under Mr. Parker's direction, stimulated such interest among the Auxiliary members that it is hoped the Auxiliary can purchase a copy of this film to show to high school students throughout the state.

We were all thrilled to have Governor and Mrs. Brewer as honored luncheon guests on Wednesday. Governor Brewer's address, "Women's Role in Modern Politics" was inspiring. If we doctors' wives would accept the many responsibilities he outlined for women in today's politics, and fulfil them—what an accomplishment!

The Governor's Coordinator of Highway and Traffic Safety, Mr. Richard O. Payson's dynamic address rekindled the Auxiliary's hopes of having as a state-wide project the notation of emergency medical information on drivers' licenses, and to further promote the Defensive Driver's Educational Program.

I shall always be indebted to the doctors who participated. Dr. Archie Thomas brought greetings from MASA at Wednesday's luncheon, and spoke to the assembly on Thursday. His talk entitled, "The Medical Association and its Auxiliary" was excellent, and made it clearer than ever before what you, as doctors, and we, your wives, can do together to help solve the many faceted problems facing organized medicine today. Dr. John Chenault was guest speaker along with Mrs. Chenault at Wednesday night's dinner. Dr. Chenault, President of AMA-ERF, re-emphasized the importance of the continuation of this program. He also explained the disposition of the Biomedical Research Laboratory in Chicago. Mrs. Chenault spoke on, "Pitfalls of Parliamentary Procedure and How To Avoid Them." Dr. Grover Murchison, Chair-

Mrs. Howard C. Johnson

man of ALAPAC, in his forceful talk, underscored the need of doctors and their wives belonging to this organization.

Other guests of the Auxiliary included Dr. and Mrs. Ira Myers, Mrs. Thomas, Mr. and Mrs. L. P. Patterson, Dr. Jack Till, Dr. Bennie Hamner, Dr. William Smith, and Dr. Howard C. Johnson. Dr. Smith and Dr. Johnson are members of the Auxiliary's Advisory Council.

The success of the Conference was due largely to all of these men who believe the Auxiliary is an important tool in improving the health, safety, and politics of our state.

Again, my grateful thanks to the Montgomery-Autauga Auxiliary for hosting this meeting. Helen Till, President, Janie Smith, Conference Chairman, Lorene Hamner, Conference Co-Chairman and their committees are to be congratulated.

This article would not be complete without my thanking Nell Williford of the Association Office for the many, many things she did for the Auxiliary to help make the Conference-Workshop such a success.

Camille Johnson

Camille Johnson

Once There Was An Ad

Physician's Favorite Phaeton. Guaranteed to be absolutely free from horse motion or weight on animal.

For Physician's use it is indispensable, as it rides over COBBLE PAVEMENTS or FROZEN ROADS with the greatest ease. It is especially adapted to hilly or mountain roads, owing to the entire absence of weight on animal when passenger is in vehicle. It is entirely new, and the only vehicle ever produced that meets the requirements of a physician in every respect.

Most Perfect, Stylish and Easiest Riding Physician's Cart Ever Built.

The low hang of the body renders it easy of INGRESS and EGRESS, thus overcoming one of the most monotonous parts of the physician's practice. Has regular Physician's Close Top, with large side lights, stationary storm apron on dash, large drawer under seat for instruments or medicine case. Built in six different styles, with pole or shafts or interchangeable. We built no inferior work. Why use a four-wheeler, when a two-wheeler affords greater comfort and safety?

THE CHADWICK TWO-WHEELER COMPANY
Salem, Virginia

—(Advertisement in Virginia Medical Monthly, 1892)

Judge not thy friend until thou standest in his place.

—Rabbi Hillel

Not just a motel it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

Editorial COMMENT

The Modern Physician Has Reason For Thanksgiving

". . . It was a wonderful treat to hear the clatter of horses' feet."

Somehow, in this month of Thanksgiving, the catchy tune of that song so popular 40-odd years ago, "Thanks for the Buggy Ride," keeps recurring.

It is an innocent song, as the rhyming verses of it clearly reveal. And the author was doubtless completely unaware that the phrase had a much more sinister meaning. We had not yet outgrown the gangster, whose name to this very day is linked with Chicago.

A "buggy ride" in the vernacular of organized crime of that day was a synonym, according to *The American Thesaurus of Slang*, for a "one-way ride," a "slay ride," a "trip to the country," or otherwise murder by gangsters.

Thanksgiving is the first native-born American holiday—the initial one held on Monday, Dec. 13, 1621. Ever since President Washington proclaimed Thursday, Nov. 26, 1789, national Thanksgiving Day, the fifth day of the week has been traditional. President Lincoln proclaimed it the fourth (later changing it to the last) Thursday in November. And President Franklin Roosevelt moved it back to the third Thursday, in an abortive effort to widen the gap between that holiday and Christmas. This was in 1939. Two years later, the President acknowledged his mistake and Congress ruled that thereafter the fourth Thursday in November should be Thanksgiving.

Had Thanksgiving been held every year from the beginning (which it wasn't), this would be the 350th Thanksgiving Day in American history!

But this month's is the only one with which present-day America and present-day medicine are concerned. And present-day medicine, despite galloping socialism and the continual encroachment of a centralized government, has much to be thankful for.

For instance, going back in memory to the horse-and-buggy days of the turn of the century, remembering Fildes' famous picture of a child approaching her pneumonia crisis, while the family physician and the distraught parents hovered tragically by . . .

The present-day doctor can be thankful he can do something more than watch and pray.

(Continued on Page 306)

"Choice professional office space available in the Mobile Medical Center: For information write Mobile Medical Center, 1720 Springhill Avenue, suite No. 200, Mobile, Alabama 36604".

When irritable colon feels like this

The blowfish, a small specie of fish, reacts to stress or fright by puffing itself up wi air. After about a dozen noisy gulps the belly is balloo shaped and hard. When replaced in the water the ai quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

(Continued from Page 303)

The Doctor May Leave That Worry To The Pharmacist

While the world turns, it approaches its second major decision in measurement in less than 400 years.

The first change was from the erroneous Julian Calendar to the present Gregorian Calendar, decreed by Pope Gregory XIII in 1582, wherein he ordered the day following Oct. 4 of that year to be Oct. 15. Other countries were slow to follow. A hundred and thirty years later it was so ordered by Britain for herself and her colonies, including ours in the New World. The real laggards, however, were the Chinese Republic (1912), Greece and Greek Orthodox communities (1924), and Turkey (1927).

But on that other system of measurement, the United States stands alone among the world powers. England was the last to yield. And today the United States finds only 12 other spots on earth still clinging to the old fashioned style of weights and measures: Barbados, Burma, Ghana, Guyana, Gambia, Jamaica, Liberia, Malawi, Nigeria, Sierra Leone, Trinidad and Tobago.

Some 15 years ago the pharmaceutical industry in this country switched to the metric system, and all other business groups in international trade are having to use a dual system.

Two years ago the Secretary of Commerce wrote a Metric System Study Bill which became law. And a sweeping reappraisal of the system and the cost of a change-over has been in progress since.

But it will be a long time from now before you can throw away your yardsticks and readjust your thinking to knowledge that MPH stands for meters-per-hour. This despite the fact that drugs are now measured by liters and dekaliters, grams and decigrams.

GUEST EDITORIAL

The Ambient Air and Respiratory Diseases

At its beginning life apparently was represented by unicellular organisms in an aquatic environment, each cell performing all the functions of specialized cells in more complex animals. The cell membrane was the interface between the internal protoplasm and the surrounding medium. Presumably only minor changes in the environment were tolerated.

At the other end of the evolutionary scale and millions of years later through a process of selective adaptation a highly organized and integrate mass of complex and specialized cells constitutes man. By virtue of large and rapidly increasing numbers acting in concert he has altered his environment in so capricious a manner as to threaten seriously the balance in the ecosystem that supported his vast proliferation.

Man is a remarkable organism in myriad ways but in certain physical attributes three aspects seem pertinent. The skin, his heaviest organ, is one interface between his internal and the external environment. It prevents fluid loss from the cells and regulates the body's temperature within almost unbelievably narrow limits—aside from serving multiple other functions—not the least of which is to serve as a sensing organ to supply continuous information about the environment to the nervous system.

The gut is another interface which tolerates multiple insults in both quality and quantity and from which only highly modified and carefully selected substances actually enter the body, the remainder being discharged

(Continued on Page 309)

The girth control pill

Tepanil® Ten-tab

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathamimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

0915A 1/7C

(Continued from Page 306)

after extraction of any excess transport fluid.

The third and perhaps the most delicate interface, is the alveolar wall, a delicate and all but non-existent membrane that affords minimal resistance to the respiratory exchange of gases between the air sacs and the blood stream. It demands careful protection from dessication and hostile elements.

The respiratory system—more accurately, the ventilatory mechanism—not only accepts and warms air of a wide range of temperatures but humidifies it to 100 percent saturation even before it reaches the smaller bronchi. Additionally, through the activity of the muco-ciliary system it traps and expels all particulates five to ten microus and larger—including micro-organisms. The tracheobronchial mucosa, moreover, is capable of antibody response to help protect the lungs from hostile elements in the inspired air. Elastic recoil exists largely by virtue of the moisture lining the bronchioles and alveoli. Logically, this effect would cause collapse of the smaller structures were it not for the presence of a remarkable polysaccharide produced by the alveolar cells and known as surfactant. This substance is readily destroyed by almost any abnormal element that penetrates to the distal portion of the respiratory tract.

Polluted air contains suspended particulates smaller than ten microus. Noxious gases such as sulfer and nitrogen oxides are adsorbed on these particles or droplets in concentratious for higher than can be achieved in the gaseous state. These unnatural bits of matter paralyze the ciliary action, stimulate proliferation and hypertrophy of the goblet cells and cause an increased secretion of mucous of abnormally high viscosity. They also penetrate to the air sacs where they destroy surfactant and where the gases cause dissolution and rupture of the alveolar walls. This process, over a period of years, is the probable cause of the spectrum of diseases known as chronic emphysematous bronchitis.

Carcinogens are also present in the polluted air and the result of inhaling these is equally devastating in a rapidly increasing number of individuals.

These diseases do not commonly cause disability in the age group in which reproduction is most common and therefore, have little or no influence on the process of selective adaptation and it is unlikely that we can adopt to increasing levels of pollution anyway. Morever, the effect on the multiple other elements in our ecosystem can only be guessed at and one wonders if we really have a choice between restoring clean air or tolerating high levels of respiratory illnesses and reduced life expectancy.

William J. Tally, M. D.
Medical Director
Dist. IV Tuberculosis
Gadsden, Alabama 35901

Page 1

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION
(Act of October 23, 1962; Section 4369, Title 39, United States Code)

Publisher: File two copies of this form with your postmaster. Postmaster: Complete certification on page 2.

Form Approved Budget Bureau No. 68-R029

1. DATE OF FILING: October 1, 1970
2. TITLE OF PUBLICATION: THE JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
3. FREQUENCY OF ISSUE: Monthly
4. LOCATION OF KNOWN OFFICE OF PUBLICATION (Street, city, county, state, ZIP code): 19 South Jackson Street, Montgomery — Montgomery, Alabama 36104
5. LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS (Not printers): 19 South Jackson Street, Montgomery, Alabama 36104
6. NAMES AND ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR

PUBLISHER (Name and address): Medical Association of the State of Alabama, Montgomery, Alabama

EDITOR (Name and address): William L. Smith, M. D., 19 South Jackson Street, Montgomery, Alabama 36104

MANAGING EDITOR (Name and address): L. P. Patterson, 19 South Jackson Street, Montgomery, Alabama 36104

7. OWNER (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)

NAME	ADDRESS
Non-Profit Organization	
Medical Association of the State of Alabama	19 South Jackson St., Montgomery, Ala.

8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (If there are none, so state)

NAME	ADDRESS
None	

9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES (Section 132.122, Postal Manual) (Check one)

The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes: ☐ Have not changed during preceding 12 months ☐ Have changed during preceding 12 months (If changed, publisher must submit explanation of change with this statement.)

10. EXTENT AND NATURE OF CIRCULATION	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	ACTUAL NUMBER OF COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
A. TOTAL NO. COPIES PRINTED (Net Press Run)	2,950	3,000
B. PAID CIRCULATION 1. SALES THROUGH DEALERS AND CARRIERS, STREET VENDORS AND COUNTER SALES	None	None
2. MAIL SUBSCRIPTIONS	2,698	2,725
C. TOTAL PAID CIRCULATION	2,698	2,725
D. FREE DISTRIBUTION (including samples) BY MAIL, CARRIER OR OTHER MEANS	198	197
E. TOTAL DISTRIBUTION (Sum of C and D)	2,896	2,922
F. OFFICE USE, LEFT-OVER, UNACCOUNTED, SPOILED AFTER PRINTING	54	78
G. TOTAL (Sum of E & F—should equal net press run shown in A)	2,950	3,000

I certify that the statements made by me above are correct and complete. (Signature of editor, publisher, business manager, or owner) ▶ Editor

POD Form 3526 Mar. 1968

Two Of Nine Qualifying For 50-Year Club

DR. SEIBOLD

DR. LAWRENCE

It is a rather circuitous way to travel from Guntersville to Birmingham via Tuscaloosa, Mobile and New Orleans, but it is the way followed by one of Jefferson County's obstetricians, now retired.

James Loveless Seibold was born in Guntersville August 23, 1896, went to the University of Alabama at Tuscaloosa for his baccalaureate, on to the Medical College of Alabama in Mobile, and earned his M. D. degree from Tulane in 1921, wherein he qualifies for membership in MASA's 50-Year-Club at next April's meeting in Birmingham.

Dr. Seibold served a year's rotating internship at Hillman Hospital (now University) in Birmingham and three years of specialty training in OB-GYN in New York City, at Memorial Hospital, the Berwind Maternity Clinic, and Sloane Hospital for Women.

He practiced obstetrics in Birmingham from 1925 until his retirement two years ago.

Dr. Seibold is married to the former Margareate Stewart and they have two daughters:—Mrs. Sidney D. Johnston of Grenada, Miss., and Mrs. Stephen Klein of Birmingham. The Johnstons have a daughter.

A South Carolinian, who married into a prominent Central Alabama family a year after earning his M. D. degree in 1921, and who was nearing his 40th wedding anniversary when he first assumed medical responsibilities in his wife's native state, is one of nine Alabama doctors who will become members of the 50-Year Club at MASA's next annual meeting.

Ralph Lewis Lawrence was born in Pickens County, South Carolina, on Sunday, Aug. 8, 1897, was graduated from Westminster (S. C.) High School in 1913, and four years later earned his baccalaureate degree from Furman University, Greenville. Another four years, or in 1921, he received his M. D. from the Medical College of South Carolina, Charleston.

Interning a year at the U. S. Marine Hospital, New York City, he was commissioned in the U. S. Public Health Service June 30, 1922. In this year he was married to Alida McLemore of Montgomery. They have a daughter, Ann.

In the years between 1922 and Sept. 1, 1961, when he was retired from the U. S. Public Health Service Outpatient Clinic in Cincinnati, Ohio, with the grade of Medical Director, Dr. Lawrence had served some 15 assignments, including Foreign Quarantine from Boston, Mass., to Manila, Philippine Islands, U. S. Marine Hospitals, U. S. Employees Compensation Commission, and U. S. Bureau of Prisons Hospitals, with the Department of Justice.

On Feb. 1, 1962, Dr. Lawrence joined the Alabama State Department of Public Health, with the Indigent Medical Program, cooperating with the Department of Pensions and Security. He retired Sept. 1, 1967.

Retirement hobbies are gardening and painting.

"Money doesn't talk any more. It just goes without saving."

—TypoGraphic

Premature Mortality--What Is The Answer?

By A. M. Overbach, M. D.

Instructor, Department of Pediatrics

University of Alabama Medical School

In spite of the increasing application of new and tested techniques for treatment of the problems associated with premature birth (hyaline membrane disease, intracranial hemorrhage, hypoglycemia, etc.), the statistics for perinatal mortality in the University of Alabama High-Risk Nurseries have changed relatively little in the past three years (see Table). The answer to the survival of a premature infant must not lie solely in the care he receives after birth. In fact, as stated, even the most up-to-date methods and excellent therapy post-delivery cannot be as important a factor as the care the infant receives while in utero, for this care may determine whether or not the birth will occur before the onset of maturity. The environment must be the key factor. For this reason the nutritional and biochemical status of the mother not only during pregnancy, but also during her earlier life must be considered to be significant factors.

Prenatal care, of course, is to be stressed, but health care and dietary supervision of all potentially pregnant females will need to be improved if any progress in decreasing premature mortality is to be made. In this way, perhaps, the "too-early" delivery may be avoided.

At the present time much government spending is being directed toward establishing a higher standard of health care and diet for all people and additional funds are being allocated for research in the fields of nutrition and body composition.

If this is the answer, the premature mortality rate can be expected to drop as the incidence of prematurity drops due to these improvements over the next several years. With this in mind we will continue to aggressively treat our premature infants with the ever-improving available supportive techniques and watch the combination of better pre- and post-delivery care decrease the mortality statistics.

Risk of neonatal death (in %) by birth weight in UAHC 7/67 - 6/69 compared with previous years

Birth weight (grams)	1965-66	1966-67	1967-68	1968-69
< 1000	96%	73%	81%	91%
1000 - 1500	37%	26%	25%	19%
1501 - 2000	11%	7%	8%	8%
2001 - 2500	5%	2%	1%	0.8%
> 2500	0.5%	0.4%	0.3%	0.5%
Total "prematurity" mortality	15%	11%	8%	10%
Total neonatal mortality	2.1%	1.9%	2.0%	1.9%

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

His wife has a lot of different menopausal symptoms, but only a few really irritate *him*. Her hot flashes, her vertigo, her palpitations—that's *her* problem. What really bothers him is her nervousness, her irritability and her excessive anxiety, often expressed by endless "book-shuffling, chain-smoking, reading-lamp" insomnia!

Menrium takes care of hot flashes, vertigo, palpitations in most menopausal women. Menrium provides the well-known antianxiety action of chlordiazepoxide (Librium®) and water-soluble esterified estrogens. It therefore relieves more symptoms than either component separately. It takes care of the vasomotor symptoms as well as the emotional symptoms. This means the symptoms that bother his wife most. And the symptoms that irritate him most.

So, to help them both get through her menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

Anesthesiology—

University of Nebraska, 1965, Board certified, seeking solo, group or associate practice. Available July 1971. LW-1

Dermatology—

Age 32; State University of New York, 1964; National Board; Board eligible; seeking solo, group or associate practice. Available July 1971. LW-2

General Practice—

Age 28; Medical College of Alabama, 1967; National Board; serving general surgery residency Available July 1971. LW-3

Age 49; University of Pittsburgh, 1951; seeking group or industrial practice. LW-3/1

Internal Medicine—

Age 34; Georgetown University, 1962; Board certified; seeking group or associate practice. Available August 1971. LW-4

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 33; Medical College of Alabama, 1963; National Board; Available January 1971. LW-4/1

Age 31; Albert Einstein College, 1964; National Board, seeking group, associate or institutional practice. Available July 1971. LW-13

Age 34; Louisiana State University, 1963; Board certified; seeking group practice. Available August 1971. LW-13/5

Obstetrics-Gynecology—

Age 44; Louisiana State University, 1956; Board certified; seeking solo, group, industrial, associate practice. LW-5

Ophthalmology—

Age 30; University of Nebraska, 1965; seeking group or associate practice. Available July 1971. LW-6

Otolaryngology—

Age 33; Loyola University, 1964; Board eligible; seeking solo or associate practice. Available July 1971. LW-7

Age 33; Wayne State University, 1966; Available July 1971. LW-7/1

Pathology—

Age 32; Case Western Reserve University, 1964; National Board; Board certified; seeking group, associate or institutional practice. Avialable August 1971. LW-8

Age 41; Louisiana State University, 1956; Board certified; seeking solo or associate practice. Available late 1970. LW-20

Age 30; University of Texas, 1967; seeking solo, group or associate practice. Available March 1971. LW-22

Psychiatry—

Age 47; Mainz Medical University, Germany, 1957; Board eligible; seeking group, industrial, associate or institutional practice. LW-9

Radiology—

Age 31; University of Kansas, 1965, seeking group practice. Available July 1971. LW-10

Age 32; Medical College of Alabama, 1963; completing residency in radiology. LW-24/2

Age 31; Vanderbilt University, 1965; National Board; Board certified; seeking group or associate practice. Available July 1971. LW-10/1

Age 35; University of North Carolina, 1961, Board eligible; Available early 1971. LW-10/2

Surgery—

Age 30; Medical College of Alabama 1965; National Board; Board eligible; interested also in general practice with surgery; Available July 1972. LW-11

Age 31; Medical College of Alabama 1964; National Board. Available July 1971. LW-31/6

Age 36; Emory University, 1959; Board certified; seeking associate practice. LW-31/5

Age 31; Johns Hopkins 1964; Board eligible; seeking solo, group, associate or institutional practice. Available July 1971. LW-31/2

Physicians Wanted

Special Openings—

Qualified specialists wanted for private practice in internal medicine, general surgery, Ob-Gyn, general practice, pediatrics, anesthesiology, orthopedics, and other sub-specialties. Office space in 250-bed private hospital, Guaranteed initial income and other benefits. PW-17

General surgeon, Board certified, needs young associate to do general practice including obstetrics. Salary negotiable. PW-19

Two physicians, ages 39 and 40, are interviewing for a select individual to enter association in a university town of 80,000 population. Outstanding new physical plant. Readily available hospital privileges. Four and one-half day work week. Three free weekends per month. PW-19/2

Specialist in the following fields: Internal Medicine, Pediatrics, Obstetrics-Gynecology and General Practitioners. 58-bed fully accredited general hospital with 91-bed addition recently completed. Modern new office space available. PW-20

Pediatrician, Internist, and ENT specialist to join a well-established group practice in a community of 40,000 in East Alabama. The community has a 125-bed accredited hospital, 32-bed extended care facility. Good transportation on interstate with quick access to metropolitan area. Will pay travel expense for interview. PW-20-1

Opportunity for ENT, Internal Medicine, and Orthopedic Surgery practitioners to join partnership at clinic located in city of 38,000 population in trade area of 150,000 population in northeast Alabama. PW-20/2

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Position available for a clinic physician with special Family Planning Project of the Jefferson County Department of Health. Salary range $20,000 to $24,000, depending on amount of training in Obstetrics and Gynecology and Family Planning. PW-26/1

Obstetrician-Gynecologist—

Excellent opportunity for a trained Ob-Gyn man, who would join a two-man partnership in city of 30,000 population located in south central Alabama. Salary is proposed for the first year, with partnership thereafter. PW-25

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Opportunity in town of 4,000 population in trade area of 50,000 population, located within 100 miles of two metropolitan areas in south Alabama. Industrial and farming area. 44-bed hospital. Office space and equipment available in new building with another physician. Several churches, schools, and service clubs. PW-1

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

For town of 10,000 population in county of 40,000 population located in scenic mountainous section of Northeast Alabama. Office space and equipment available. Hill-Burton hospital-nursing home. Expanding industries in top agricultural area. PW-1-2

For community of 2,000 population, plus large trade area, located in Southeast Alabama. Modern clinic, fully equipped. PW-1-3

Physician wanted to join 39 year old Medical College of Alabama graduate in a well established practice in West Central Alabama town. Salary initially followed by full partnership. PW-1-4

Hospital based professional association in suburb of Birmingham is seeking a young general practitioner who has completed military obligation. High income, profit sharing, paid vacation and retirement plan. Complete facilities available. No investment required. PW-1-5

Opportunity in community of 3,000 population with over 8,000 population in trade area, near metropolitan area in northwest Alabama. Clinic and office equipment available. New 400-bed hospital and older hospital, and several nursing homes. PW-1-6

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
PINT (473 cc.) M-148
Lilly
ILOSONE
LIQUID
ERYTHROMYCIN ESTOLATE
ORAL SUSPENSION, U.S.P.
125
SHAKE WELL BEFORE USING
REFRIGERATE
AVOID FREEZING
PINT (473 cc.) M-153
Lilly
ILOSONE
LIQUID
ERYTHROMYCIN ESTOLATE
ORAL SUSPENSION, U.S.P.
250
SHAKE WELL BEFORE USING
REFRIGERATE
AVOID FREEZING
ILOSONE
ILOSONE
ILOSONE
CHEWABLE
ERYTHROMYCIN ESTOLATE
TABLETS, N.F.
125 mg.
100 PULVULES® No. 375
Lilly
ILOSONE
ERYTHROMYCIN ESTOLATE
CAPSULES, N.F.
250 mg.
100 PULVULES® No. 374
Lilly
ILOSONE
ERYTHROMYCIN ESTOLATE
CAPSULES, N.F.
125 mg.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

THE JOURNAL
of
THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
Published Under the Auspices of the Board of Censors

Volume 40 November, 1970 Number 5

CASE REPORT: Multiloculated Lymphangiomatous Cyst Of The Ileum

R. E. Vickery, M. D.

Andalusia, Alabama

Most authors agree that lymphangiomas are rare entities and that these cysts customarily remain asymptomatic, presenting most often as an unexpected finding at surgery or autopsy.[1] However, these tumors are the most common benign cystic tumor of the mesentery. On occasion lymphangiomatous tumors reach proportions of 20 centimeters or larger in diameter and can be described as filling the abdomen. When such size is reached the patient often presents himself complaining of pain and discomfort associated with this mass.[2]

Pathological study of these cysts has revealed that they may be single or multiple; unilocular or multilocular; the fluid present may be serous or chylous with the chylous variety by far the rarest. The theoretical explanation of the etiology of these cysts is that they are either due to obstruction of an existing lymphatic channel with subsequent dilation of the proximal obstructed lymphatics or they are due to congenitally misplaced lymphatic tissue which fails to develop a vascular communication.[3] Morehead tells us that malignancy has not been reported in these lesions.[4]

The treatment of choice for lymphangiomas is surgical excision. This may involve resection of portions of the bowel, dependent upon the size of the cyst and location. Aspiration of these cysts has been carried out in some cases, but almost inevitably the cysts reoccur. Both external and internal marsupialization has also been tried, but has been found not entirely satisfactory.[5]

The following is a case report of a cystic lymphangioma which contained chyle and was treated by total surgical excision.

CASE REPORT: This patient was a 42 year old white male who had been found to have an abdominal mass some three years prior to admission, at which time he had refused surgery. On admission he stated he had had no difficulties with this mass such as vomiting, diarrhea, melena, hematemesis, and most significantly, he mentioned no pain. He had, however, noted some increase in the size of the mass, and this prompted his decision for elective surgery.

PHYSICAL EXAMINATION: Physical examination revealed a well-developed, well-nourished white male who was alert and cooperative. His admitting blood pressure was 140/80, temperature 99°, pulse 60, and respirations 20. There was a normal rate and rhythm to the heart with no murmurs or evidence of cardiomegaly. The lungs were clear to auscultation and breath sounds equal. Examination of the abdomen revealed a

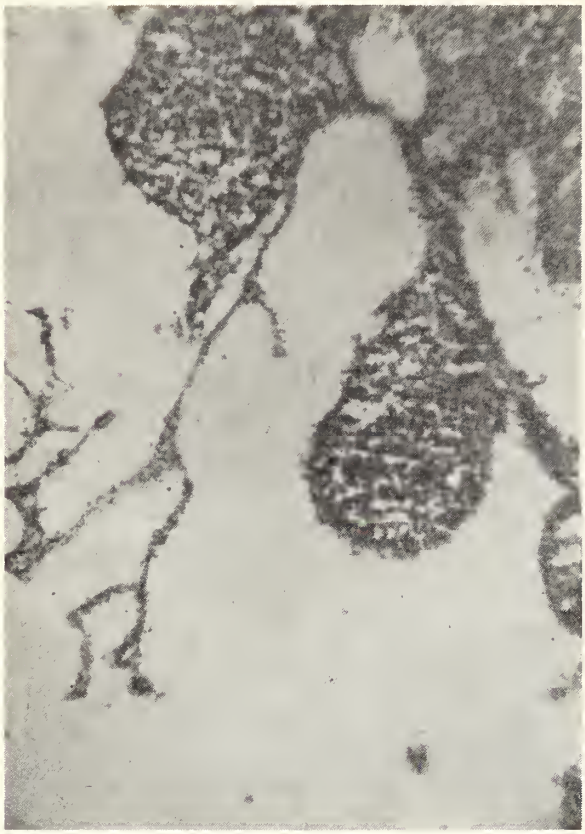


Figure 1

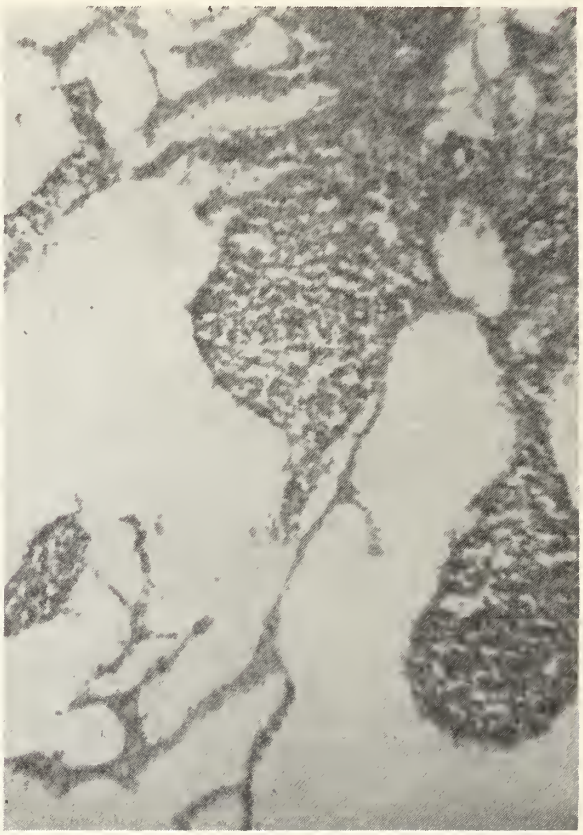


Figure 2

1. Pictures numbered one through four are photomicrographs showing the proliferating dilated lymphatic spaces and associated lymphoid nodules; both of which are characteristic of abdominal lymphangiomas.

saucer shaped mass in the left flank and lumbar area, more so in the left lumbar area, but also palpable in the peri-umbilical area just to the right of the midline. This mass was movable, tender, flat and appeared to be solid. There was no pulsation. It was difficult to determine exactly to what this mass was probably attached, however, the possibility of an omental tumor was initially entertained. Because of the long history of the presence of the mass and its clinical course, it was felt to be benign. The remainder of the examination was unremarkable.

RADIOLOGICAL DATA: Upper G. I. and Small Bowel Study revealed a non-discrete soft tissue mass in the lower part of the abdomen and upper portion of the pelvis at or slightly to the left of the midline. This finding was considered compatible with a mesenteric cyst. On KUB and IVP, the soft tissue mass was not demonstrated. IVP was considered normal as was cholecystogram.

LABORATORY DATA: On admission the Prothrombin Time was 100%. Fasting Blood Sugar was 82 mgs%. BUN 20 mgs.%. Urinalysis was unremarkable. Hematocrit was 51% with 7,950 WBC count. Post-operative electrolytes were slightly low immediately following surgery, but rapidly returned to normal following intravenous fluids. Post-operative hematocrit was 47%.

SURGICAL AND PATHOLOGICAL FINDINGS: At surgery patient was found to have a large chyle tumor in the mesentery near the midileum. This involved approximately 50 centimeters of the intestine necessitating resection of this amount of intestine in the midileum region. The tumor was multicystic, appearing similar to a honeycomb. The tumor mass was removed in-toto, after lysis of adhesions was carried out, with end to end anastomosis of the ileum. Post-operative course was uncomplicated, and he

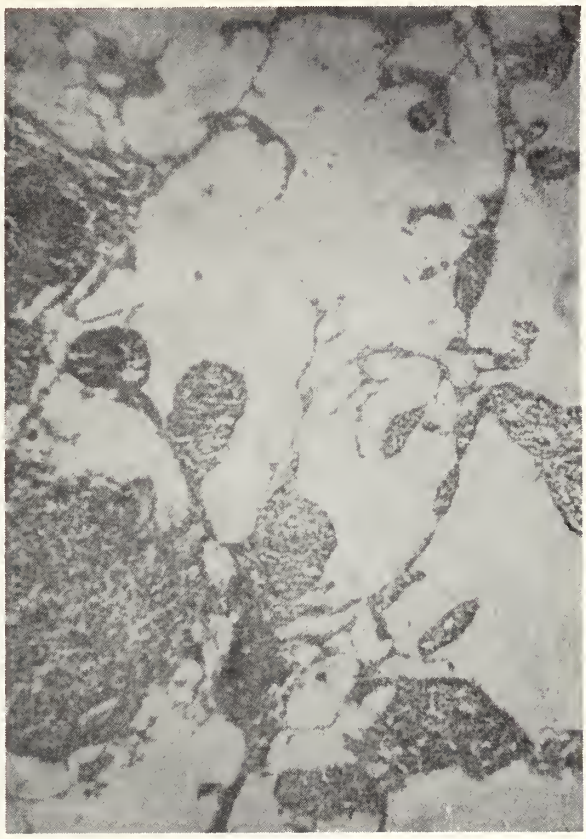


Figure 3

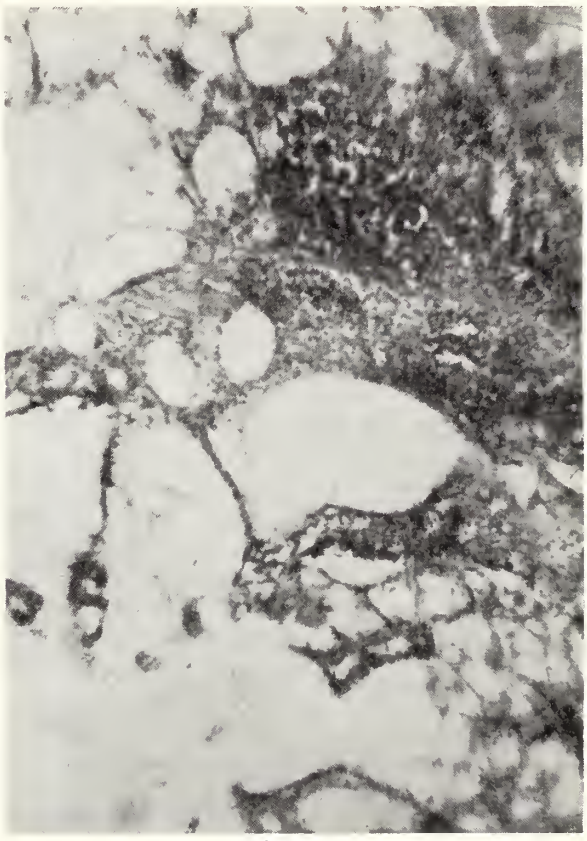


Figure 4

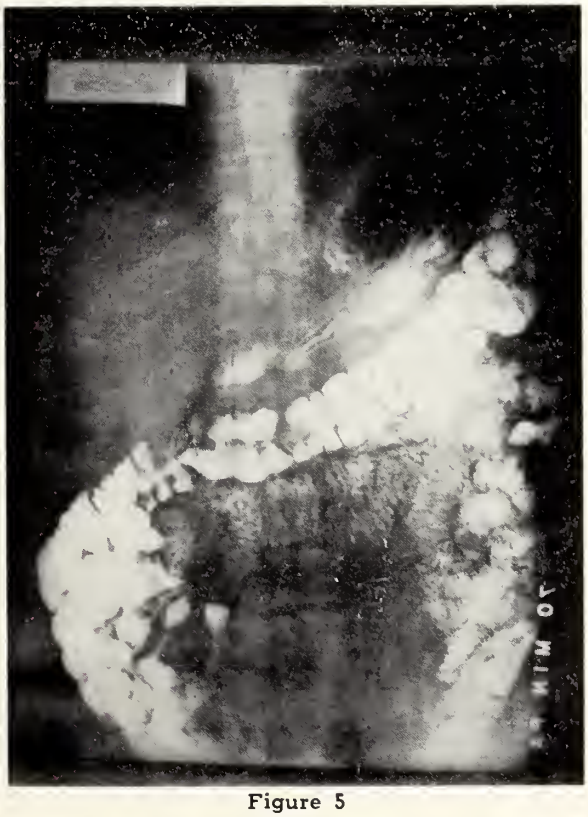


Figure 5

Figure 6

2. Pictures numbered five and six are views of Upper G. I. Series and Small Bowel Study demonstrating soft tissue mass in the abdomen and upper portion of the pelvis near the midline compatible with a mesenteric cyst.

was discharged on the sixth post-operative day.

On pathological examination the tumor was nine centimeters in diameter and filled with milky fluid. On cut section the tumor was multicystic and found to contain chyle. The lymphatic spaces were proliferative and dilated with associated lymphoid nodules. Diagnosis was cystic lymphangioma of the small intestine, benign.

SUMMARY: A rare tumor was encountered in a 42 year old white male who presented with a history of an abdominal mass for three years increasing in size recently. Physical examination revealed a mass which was saucer-shaped and occupied the left flank and lumbar area and was palpable just to the right of the midline. This mass was excised along with 50 centimeters of the midileum which was involved with the tumor. Pathological examination revealed a multilocular lymphangioma filled with chyle. Patient made an uneventful recovery, and two years post-operatively he continues to be asymptomatic.

References

1. and 5. Henzel, Pories, Burget, and Smith: Intra-abdominal Lymphangiomata: Archives of Surgery, 93:304-308, 1966.

2. and 4. Morehead, R. P.: Human Pathology: Page 1513 and 689, 1965 Edition.

3. Farrell and Grube: Intra-abdominal Cystic Lymphangiomas: American Journal of Surgery, 108:790-793, 1964.

Legal Loopholes

A legal loophole probably can be defined as as weakness or defect in or an omission from a law. Usually it results from error or oversight by a law-making body. Webster defines it as a means of evading the "intent" of a law.

Under our system of justice laws must be exactly and precisely worded, and they are taken to mean exactly what they say and no more. If a law is properly written, all citizens can have the same understanding of what it means. If lawmakers expressed only a general "intent" or a hazy, inexact statement of a law they wished observed, those who read it, even in the best of faith, could get a wide variety of ideas of what exactly was meant. And there would be chaos.

Even the Internal Revenue Service, in its collection of income taxes, insists only that the exact letter of the law, as written, be obeyed; it tells taxpayers they may take advantage of every proper legal means—sometimes even a "loophole"—to avoid paying taxes not specifically required under the law.

Thus if there is a legislative omission or defect in any law, a lawyer is compelled under his Canons of Ethics as part of his duty to his client to try to find and point out that omission. If the courts agree the law has a "loophole," the lawmakers then can remedy it.

His Canons of Ethics bind every lawyer, "by all fair and honorable means, to present every defense that the law of the land permits" (including errors or omissions in the law as it is written), so that no one is deprived of life or liberty except by due process of law.

And the Canons add "The client is entitled to the benefit of any and every remedy and defense that is authorized by the law of the land, and he may expect his lawyer to assert every such remedy or defense"—including an actual legal loophole.

(This is written to inform, not advise. Facts may change the application of the law.)

—Washington State Bar Association Legal Column

Blood Gas, Fluid And Osmotic Monitoring In The Coronary-Pulmonary Care Unit

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

The time when a pulmonary or coronary care unit was a rarity in a few isolated hospitals is long past. Now, almost every hospital has some form of a unit used for the purpose of treating heart and serious lung patients. In too many instances, as special units develop, emphasis has been placed on learning how to handle the electrocardiogram and its variations. This is unfortunate since electrocardiography is only a part of a good coronary-pulmonary care unit.

Coronary-Pulmonary Care Units can be divided into three types. (1) The EKG monitoring unit is one that is set up with any amount of frills that the institute wants to provide but, when it is finished, you monitor primarily the electrocardiogram and take care of its emergencies. At the same time blood pressure is taken at varying intervals with a blood pressure cuff and the patient may or may not be catheterized and urine volume followed. (2) Next is the basic signs monitoring unit. Here, in addition to monitoring the EKG, the central venous pressure and/or pulmonary artery pressure are measured and, in many instances, cardiac output is determined. The patient is catheterized and frequent urine volumes are measured to determine the adequacy of tissue perfusion. (3) The completely monitored unit is one in which all of the above are measured and, in addition, arterial pressures are continually monitored preferably by pressure transducers. Blood gases are monitored as are electrolytes, total serum protein, hemoglobin, hematocrit, and blood urea nitrogen in an effort to maintain a complete picture of the patient's status as he progresses.

The reams of literature that are written on the monitoring of the electrocardiograms, central venous pressure, pulmonary artery pressure and urinary output do not need to be repeated. They are quite sufficient in their entirety, and there will be no attempt here to reduplicate any of that gross wordage. This article will deal with the blood gases, pH, fluid and osmotic balance. This is an attempt to cover as clearly and practically as possible the reasons why it is necessary to monitor these factors and methods of treatment where treatment is indicated.

Part I
pH, PCO2, and PO2

There are several causes of difficulty that develop in the patient in the coronary-pulmonary care unit that directly affect the pH, PCO2, and PO2. The first of these is alveolar hypoventilation. The individual who has had a heart attack is having pain. To control this pain requires frequent and heavy narcotics. These narcotics sedate the patient and depress the patient's respiration. Most narcotics produce headaches so that there is added medication of one sort or another for the headache. The patients are quite apprehensive and tranquilization, either with the older barbiturates or more up-to-date tranquilizers, is added and, as a result, the patient hypoventilates. In addition he is lying quite still; he is afraid to move particularly now that he is wired up and hooked up to all the different machines. (This causes regional ventilation). With the resultant depression of respiration, alveolar hypoventilation is produced. If the blood gases are being monitored, it is noted at this point that the pH is getting more acid, the PCO2 is increasing, the PO2 is going down. This is a rather typical picture of acute respiratory acidosis or alveolar hypoventilation and is seen not

only in the coronary care unit but anywhere that heavy sedation or narcotics are used.

The second cause of difficulty in the coronary patient is that of interpulmonary fluid volume. Normally the left and right heart maintain, through inspiration and expiration a fairly constant output relationship which is usually thrown off balance by a heart attack, at least for the initial period. As this balance is thrown off, the right heart continues with its normal output; the left heart usually decreases to some extent its output. The result is sequestration (or collection) of fluid in the pulmonary vascular system. As this continues there is congestion with development of interstitial fluid. If this continues then the fluid escapes into the alveolar spaces and, if this continues, then acute frank pulmonary edema may occur due to left ventricular failure. When this occurs the pH stays the same or gets more acid, the PCO2 remains the same or increases but, routinely, the PO2 decreases as fluid develops in the interstitial tissue and in the alveolar area. This produces a marked increase in the capillary alveolar oxygen gradient and reduces PO2. The treatment of these situations has been covered in the article "THE PLACE FOR RESPIRATORS IN THE CORONARY CARE UNIT" (which appeared in the Journal of Alabama State Medical Association, Oct. 69, V:39, NO: 4, p: 355-360) and will not be repeated here.

The third cause of difficulty in the coronary patient is that of multifocal alveolar collapse. The patient is usually flat on his back with very little movement. Sitting up to forty-five degrees is not movement as far as the area ventilated is concerned. The patient begins to ventilate only a fixed area of the lung and, as the increasing fluid mentioned previously collects within the pulmonary vascular system along with the lack of ventilation within the remaining lung, surfactant factors intervene to produce surfactant atelectasis in the non-ventilated alveoli which are circulated and cause shunting to the left heart. As this occurs, hyperventilating the normal functioning alveoli will maintain pH and PCO2 but will not help oxygenation to any extent. This was discussed in the article "THE PULMONARY ALVEOLUS, HOW IT WORKS AND WHAT AFFECTS IT." (Journal of the Alabama State Medical Association, July 1970, V:40, NO:1, p:33-41)

Thus, we notice developing in the coronary patient when he is put to bed, multiple causes for decreases in his arterial oxygen saturation. Along with these there may or may not be a more acid pH with an elevation in the PCO2. These can have deleterious effects on the heart and its efficiency. These effects will be discussed at a later point in this paper. The first important thing to do is to differentiate the problem if possible. If oxygen alone is used, in alveolar hypoventilation, it will displace nitrogen at the alveolus and will elevate the arterial oxygen saturation. With an already depressed respiratory center however, this can decrease respiration even further with an increase in alveolar hypoventilation which produces an increase in PCO2 beyond the 70 millimeters of mercury response level and a concomitant further drop in pH to the acid side to the point that respiration may be grossly interfered with and Cheyne Stokes breathing comes into play to maintain breathing. When this patient is getting oxygen, oxygen apnea can occur and may prove fatal. Oxygen will improve hyopventilation PO2 and reductions in PO2 due to congestion. The CO2 is elevated as either of the above situations occur. The patient should receive more than just oxygen. One of the two problems or a combination, do occur in almost all coronary patients. The third situation that develops is multiple focal alveolar collapse (multiple focal surfactant atelectasis). As this develops increased oxygen is not effective in raising arterial oxygen saturation and as oxygen is added there is little change in the PO2.

What can be done to correct the situation with a falling pH, and increasing PCO2 and a falling PO2 when there exists hypoventilation, pulmonary congestion, and multiple focal alveolar collapse?

IPPB is used in hypoventilation frequently enough to increase and accomplish CO2 washout. This will allow for elevation in PO2 and will return the pH toward its normal level. IPPB at 20-25 centimeters of water pressure, if there is a pulmonary collection of fluid, will transfer fluid from the lungs to the peripheral circulation despite the failing left ventricle. If we have multiple focal alveolar collapse intermittent positive pressure breathing with obstructive technique (obstructive technique is holding the machine on for 25-30 seconds about every fourth breath during the IPPB treatment) will correct the multiple focal alveolar collapse and ventilate the full lung. The solution used should be a 20 per cent ethyl alcohol (this can be accomplished by using equal parts of 80 proof vodka and water) and racemic epinephrine which will restore low surface tension in the alveolus and keep it open. Intermittent positive pressure breathing using obstructive technique, 20 per cent ethanol and racemic epinephrine frequently enough may, despite the sedation and narcotics, maintain the patient's breathing and keep pH and PCO2 within normal limits, and PO2 at a normal level. This should be at least 80 to 100 millimeters of mercury pressure. If this does not suffice, then the next step is to go to respiratory stimulants, either Emivan or Dopram, given IV. Breathing stimulants and room air alone are rarely sufficient to maintain adequate pH, PCO2, and PO2. Where blood gases cannot be obtained, IPPB should be used every four hours for minimum safety since the patients usually do develop multiple focal alveolar collapse.

As to the use of oxygen and what amount should be used, sufficient oxygen should be used to maintain the PO2 between 80-150 millimeters mercury pressure. Much has been said about oxygen poisoning. A lot of this is due to the dryness of oxygen and the inability of the equipment it is delivered with to humidify it. In the Flower's Hospital Unit, oxygen is used 100 per cent humidified. This unit uses Bird 500 cc. nebulizers with large bore tubing and a face tent. When oxygen is moist there is still the problem of denaturation of surfactant, of paralysis of the ciliary mucous escalator, and of lymph stasis. The changes are directly due to oxygen; they cannot be done away with and oxygen should be used at no higher level than is necessary to maintain a PO2. Using a flow rate setting does not guarantee any form of delivery since, as has been pointed out with multiple focal alveolar collapse, 100 per cent oxygen given with a closed system which obtains the highest possible oxygen levels, will not sufficiently oxygenate the blood to maintain 100 millimeters of mercury pressure due to the tremendous degree of shunting. Usually 5-10 liters of oxygen per minute are more than sufficient to maintain a good oxygen level. At this point it should be noted that the heart extracts from the blood each beat all the oxygen that can be extracted, and, when PO2 is allowed to fall, then the heart is made anoxic. As the oxygen saturation falls below the critical level of 70 millimeters of mercury pressure, there is noticed a doubling in the amount of pressor agent necessary to maintain the blood pressure. This again reduces as oxygen saturation is increased back to 80-100 millimeters of mercury pressure. In the individual who is digitalized or who is slightly over-digitalized as sometimes occurs in an over-zealous effort to control failure and pulmonary edema and with the oxygen saturation dropping below 75-70 millimeters of mercury PO2 pressure, there is a marked increase in the EKG changes and arrhythmias of intoxication with the EKG returning to a normal tracing as normal oxygen levels are developed. The individual who is borderline compensated with normal oxygen saturation will quite regularly be noted to get wet lungs and develop signs of left ventricular failure and pulmonary edema as arterial oxygen saturation drops below 70 millimeters mercury pressure. If the PO2 level can successfully be elevated back to between 80-100 then these frequently disappear without further treatment. These are apparently due to an extremely sensitive myocardium to arterial oxygen level especially in the patient with an acute heart attack.

There is no advantage to extremely high oxygen partial pressures as the volume carried is in essence no more. (See "CLINICAL OXYGEN AND PATIENT RELATIONSHIP," Journal of the Alabama State Medical Association, June 1967, V:36, NO:12, p: 1467-1472.)

The pH and PCO2 tend to change together. As a rule, as the pH goes down, it is a result of PCO2 going up. In the coronary patient, there is one situation where this is not so. The pH remains fairly normal or slightly low with a slowly decreasing PCO2. This is due to a metabolic acidosis. As the CO2 bicarbonate buffer system begins to compensate then CO2 goes down instead of up with an increase in ventilation, and as this develops acute correction should be with either 1/6 molar sodium lactate or sodium bicarbonate and by increased caloric intake either by IV fluids or otherwise.

As PCO2 goes up and as pH goes down, it should be corrected as mentioned previously either with breathing stimulation, IPPB, or both. As PCO2 becomes elevated above 50 millimeters mercury pressure, then the arrhythmias begin to develop and, as it continues, they become more frequent. If this is associated with low PO2 rather persistent arrhythmias develop that are almost impossible to control, until the PO2 is elevated and PCO2 reduced to normal limits. The pH is usually a reflection of the PCO2. However, here again, the effectiveness of the pressor agents is directly dependent on the pH. As the pH falls below 7.3, there is a poor response to the pressor agents. As it drops below 7.2 there is almost complete loss of response. Therefore, in the control of the arrhythmias and in maintaining effectiveness of pressor agents in the prevention of shock-like states and cardiac inefficiency, it is mandatory that the pH and PO2 and PCO2 be monitored sufficiently to insure that they are remaining within normal limits. When correction is being accomplished they should be run frequently enough to assure adequate rapid correction without over-correction.

Books of Interest to Doctors and Patients

THE NEW HANDBOOK OF PRESCRIPTION DRUGS, by Richard Burack, M. D., Pantheon Books, 201 East 50th Street, New York, N. Y., 10022; xviii + 362 pages, indexed—$7.95.

The continuing tug-of-war between generic and brand-name drugs enlists the attention of the general public through this simply worded, clearly presented guide book, so cross-indexed as to provide prompt information on such facets as:

Current prescription drug prices, comparative prices of generic and brand-name drugs, lists of the most commonly prescribed drugs and their usage, drugs for treating children, and what Dr. Burack terms "less desirable, overpromoted drugs to avoid using." He devotes a chapter to explaining "why generic drugs are often cheaper."

The author is Clinical Associate of Medicine, and Affiliate in Pharmacology, Harvard Medical School; Chairman of the Committee on Drugs and Medications, New England Deaconess Hospital; and is on the staff of half a dozen Boston hospitals.

The publisher, Pantheon, is a division of Random House, one of the nation's largest.

—W. J. M., Jr.

CALORIES / 7 oz. Serving*

Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

'here's a soup for almost every patient and diet .for every meal and, it's made by Campbell

A fresh choice
in oral contraception
Demulen®
Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol
A distinctive combination containing 1 mg. of ethynodiol diacetate,
Searle's unique progestin with an unmatched record of
acceptance in oral contraception, and 50 mcg. of ethinyl estradiol.
The same low incidence of breakthrough bleeding and of other side effects you have
come to appreciate with ethynodiol diacetate and mestranol plus
all the convenient dosage schedule and packaging features you expect from Searle.
The choice is yours!

A fresh choice in oral contraception

Demulen®

Each tablet contains 1 mg ethynodiol diacetate/50 mcg ethinyl estradiol

Actions—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision. Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions; neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

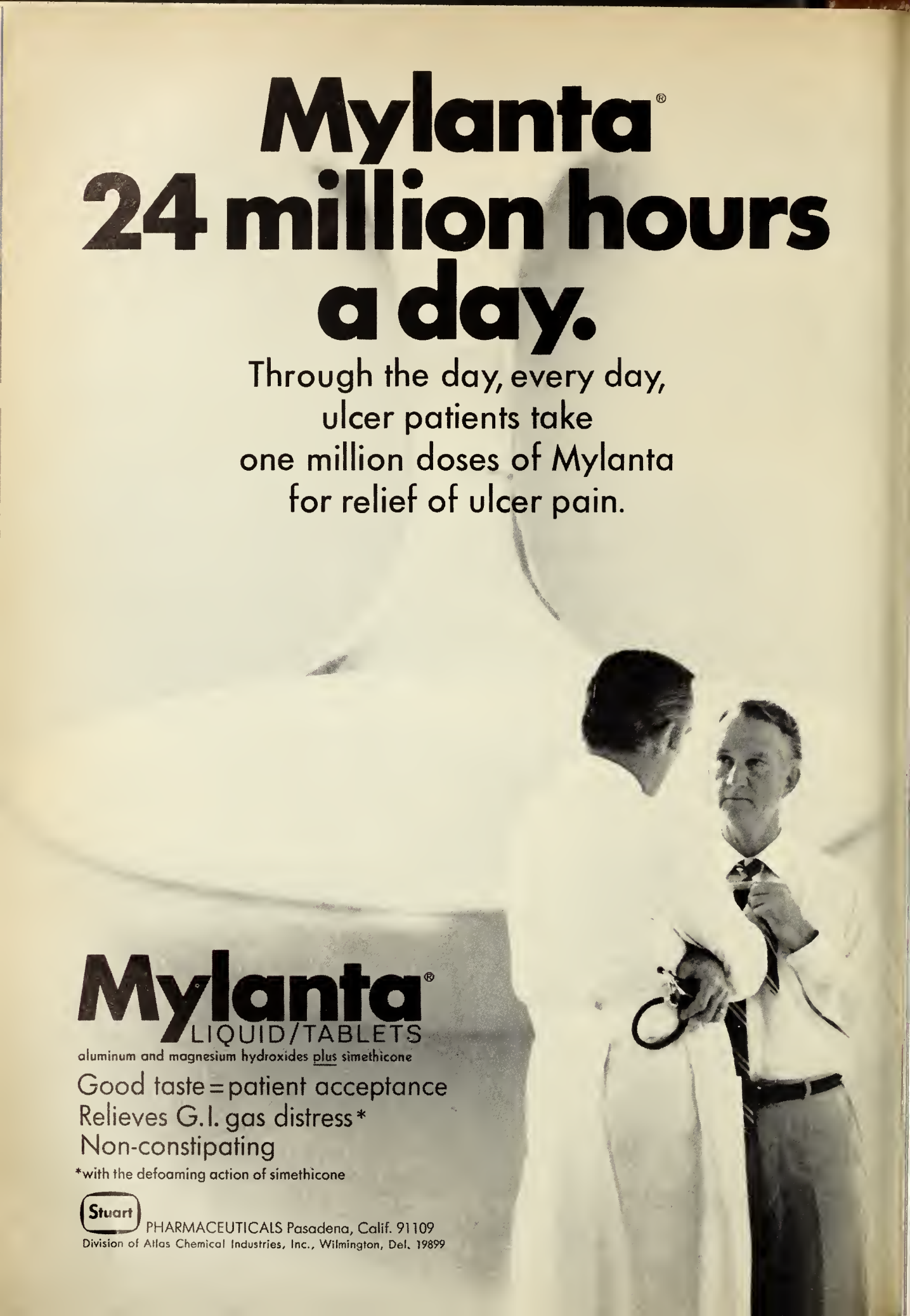
References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*: 267-279 (May) 1967. *2.* Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. *3.* Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. *4.* Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

0A4

SEARLE Where "The Pill" Began
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.



Mylanta®
LIQUID/TABLETS

aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

LOCALITY RULE

ROD NACHMAN, LL. B.

Montgomery, Alabama

My subject today is the so-called "locality rule." This rule has ancient origins in the law. An early statement of the rule was that a physician was bound to possess only the skill which physicians and surgeons of ordinary ability and skill practicing in similar localities with opportunities for no larger experience, ordinarily possess. And, negatively, the rule held that a physician was not bound to possess that high degree of art and skill possessed by eminent surgeons practicing in large cities and making a specialty of the practice of surgery.

This early rule has been stated in different ways by various courts, and, in terms, the Alabama cases which I shall cite, use language which sounds like the early statement of the locality rule. But for reasons I shall develop in this talk, you should not be lulled into any sense of false security by the words of the recent Alabama decisions.

The origins of the locality rule reveal judicial awareness that physicians in small or rural communities will, in the normal nature of things, lack opportunities to keep abreast of the advances of the profession and will not have the most modern facilities for treating patients. The courts which adopted this locality rule recognized an unfairness in holding the country doctor to the standards of doctors practicing in large cities. And, the courts attempted to make—as common-law courts often attempted to make in many and varied contexts—a practical adjustment to the needs of the time—in this instance a time when many small communities were dependent upon the services of the doctor who had limited equipment and limited opportunities to inform himself of the advances in the science of medicine.

But, this judge-made adjustment had itself offsetting disadvantages—unfortunate results which, as we shall see, have persuaded several courts in recent times to make substantial changes in the locality rule, and in some instances to abandon it altogether. An application of the rule obviously meant that if incompetent doctors predominated in any small town or rural area, these incompetent doctors set the legal standards of medical skill in the community in any malpractice case which might be brought. And, indeed, to compound this unfortunate

(This is the third in a series of talks given by prominent attorneys and physicians on malpractice and medical jurisprudence.)

result, there were no legally admissible comparative practices against which to demonstrate the ineptness or to encourage improvement through the threat of legal sanctions. Moreover, since outside medical standards were not admissible under this rule, the very witnesses themselves would be physicians who had in the aggregate set the low standards of medical skill.

I shall examine in some detail a few leading cases which have decreed a change in the locality rule. Their reasons, generally, have been the modern availability of medical journals, information regarding drugs from manufacturers and others, postgraduate courses, and other forms of continuing education which now assure that many of the most recent advances can be used easily and readily by all physicians wherever they may practice. Moreover, the existence of national specialty boards and their publication have assisted in the establishment of nationwide standards for medical specialists. It is for this reason that some of the recent decisions have eliminated the locality rule for specialists while retaining it for the general practitioner. Others, as I have said, have eliminated the rule altogether.

So much for general statements. Let us examine in detail these recent cases with a view toward some practical guidance to those of you who practice in the profession of medicine—with or without a specialty. One of the most far-reaching of the recent cases occurred in Massachusetts. *Brune v. Belinkoff,* (Mass. 1968). When Mrs. Brune gave birth at a hospital in New Bedford, Massachusetts, Dr. Belinkoff, an anesthesiology specialist, gave her a spinal injection of eight milligrams of pontocain—an anesthetic. Although this dosage of the drug was shown at the trial to be customary in New Bedford, five milligrams or less was the amount recommended by the manufacturer and normally used elsewhere. As a result of the higher concentration, Mrs. Brune's left leg was partially paralyzed, and she brought a malpractice suit against Dr. Belinkoff.

The plaintiff had requested a charge to the jury that the doctor owed her "the duty to have and use the care and skill commonly possessed and used by similar specialists in like circumstances."

The trial judge refused to give this charge and instead charged the jury:

> "'[The defendant] must measure up to the standard of professional care and skill ordinarily possessed by others in his profession in the community, which is New Bedford, and its environs. If, in a given case, it were determined by a jury that the ability and skill of the physician in New Bedford were fifty percent inferior to that which existed in Boston, a defendant in New Bedford would be required to measure up to the standard of skill and competence and ability that is ordinarily found by physicians in New Bedford.'"

Acting under these instructions, the jury returned a verdict for the doctor. On appeal, the Supreme Judicial Court of Massachusetts reversed the case and held that the trial judge had erroneously refused to give the charge requested by the plaintiff and had compounded his error by giving the charge which he did. In the course of its decision, the Massachusetts high court overruled its earlier decisions which had enunciated and applied the so-called "locality rule." The court gave the following reasons for the change:

> "The time has come when the medical profession should no longer be Balkanized by the application of varying geographic standards in malpractice cases. The present case affords a good illustration of the inappropriateness of the 'locality' rule to existing conditions. The defendant was a specialist practicing in New Bedford, a city of 100,000, which is slightly more than fifty miles from Boston, one of the medical centers of the nation, if not the world. This is a far cry from the country doctor who ninety years ago was called upon to perform difficult surgery. This may well be car-

rying the rule to its logical conclusion, but it is, we submit, a reductio ad absurdum of the rule."

Moreover, the court proceeded to enunciate the broadest kind of reversal of the locality rule—eliminating it for general practitioners and not limiting the reversal simply to specialists as some of the earlier cases had done. The Massachusetts rule hence forth is (235 N.E.2d 798):

"The proper standard is whether the physician, if a general practitioner, has exercised the degree of care and skill of the average qualified practitioner, taking into account the advances in the profession."

The Massachusetts story—relating to doctors—has been duplicated in Illinois in a far reaching decision relating to hospitals as well as doctors. The Illinois decision is *Darling v. Charleston Memorial Hospital*—a case which is worthy of rather minute consideration. On November 5, 1960, the plaintiff, who was 18 years old, broke his leg while playing in a college football game. He was taken to the emergency room at the Charleston hospital and treated by a Doctor A, with the assistance of hospital personnel. The treatment consisted of applied traction and the placing of the leg in a plaster cast. A heat cradle was applied to dry the cast.

Not long after the application of the cast, plaintiff was in great pain and his toes, which protruded from the cast, became swollen and dark in color. The toes eventually became cold and insensitive. On the evening of November 6, Dr. A "notched" the cast around the toes, and on the afternoon of the next day he cut the cast approximately three inches up from the foot. On November 8 he split the sides of the cast with a stryker saw; in the course of cutting the cast the plaintiff's leg was cut on both sides. Blood and other seepage were observed by the nurses and others, and there was a stench in the room, which one witness said was the worst he had smelled since World War II. The plaintiff remained in Charleston Hospital until November 19, when he was transferred to Barnes Hospital in St. Louis and placed under the care of Dr. B, head of orthopedic surgery at Washington University School of Medicine and Barnes Hospital. Dr. B found that the fractured leg contained a considerable amount of dead tissue which in his opinion resulted from interference with the circulation of blood in the limb caused by swelling or hemorrhaging of the leg against the construction of the cast. Dr. B performed several operations in a futile attempt to save the leg but ultimately it had to be amputated eight inches below the knee.

Both the hospital and Dr. A were sued for alleged negligent medical and hospital treatment; the doctor settled for $40,000 and a jury returned a verdict against the hospital in the sum of $150,000 which was reduced by $40,000. The appellate court of Illinois affirmed the judgment for $110,000.

(Continued on Page 332)

Ec-
on-
omy!
Dicarbosil®
ANTACID
Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.
ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

The sweep of the *Darling* decision is broad in several important aspects. The court held that a jury could properly have found from the evidence that the hospital "failed to have a sufficient number of trained nurses for bedside care of all patients at all times capable of recognizing a progressive gangrenous condition of the plaintiff's right leg, and of bringing the same to the attention of the hospital administration and to the medical staff so that adequate consultation could have been secured and such conditions rectified."

The court also held that a jury could have properly found "that the hospital failed to require consultation with or examination by members of the hospital surgical staff, skilled in such treatment; or to review the treatment rendered to the patient and to require consultants to be called in as needed." The following reasoning of the court clearly can require that a hospital administrator see to it that appropriate procedures are developed within his hospital: "On the basis of the evidence before it the jury could reasonably have concluded that the nurses did not test for circulation in the leg as frequently as necessary, that skilled nurses would have promptly recognized the conditions that signalled a dangerous impairment of circulation in the plaintiff's leg, and would have known that the condition would become irreversible in a matter of hours. At that point it became the nurses' duty to inform the attending physician, and if he failed to act, to advise the hospital authorities so that appropriate action might be taken.

The *Darling* decision is noteworthy, moreover, in its potential change of the standard of care to which hospitals, and those who treat in them must adhere. Alabama cases have heretofore spoken of the legal duty of care as being that customarily offered by hospitals generally in the community. But, this test was vastly broadened by the Illinois court in *Darling*. And, it did so by resorting in part to the regulations adopted by the State Department of Public Health under the Hospital Licensing Act of Illinois; to Standards for Hospital Accreditation of the American Hospital Association; and to the by-laws of the defendant hospital. These regulations, standards, and by-laws which were introduced into evidence by the plaintiff, in the view of the court, "aided the jury in deciding what was feasible and what the defendant [hospital] knew or should have known."

Moreover, even the question of custom—which the court finds to be what a community standard is—is not conclusive on the jury or on the courts. Quoting Judge Learned Hand in *T. J. Hooper,* the court stated.

> " 'There are, no doubt, cases where courts seem to make the general practice of the calling the standard of proper diligence; we have indeed given some currency to the notion ourselves. * * *
>
> Indeed in most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. It never may set its own tests, however persuasive be its usages. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission.' "

This case has given recent reliance in Ohio where a doctor about whom you may know something, Dr. Samuel H. Sheppard, (now deceased) and the Youngstown Osteopathic Hospital were sued for $530,000. The Newspaper accounts indicate the following facts:

> "A Youngstown widow sued Dr. Samuel H. Sheppard and the Youngstown Osteopathic Hospital for $530,000 today, claiming their negligence contributed to the death of her husband.
>
> "Mrs. Marcia Lopez, administrator of the estate of her late husband, Samuel, brought the suit in Mahoning County Court on behalf of herself and her three minor children.

"The petition charged Dr. Sheppard was negligent in lacerating an artery while performing a spinal operation on Lopez on August 6. This resulted in hemorrhaging, which caused Lopez's death. Mrs. Lopez also claimed in her petition that the hospital was negligent in selecting Sheppard for its staff and in allowing him to perform the operation when he had not practiced for 10 years. The coroner ruled that Lopez's death was accidental."

Cases in Iowa and Washington have retained the locality rule only for general practitioners and have abandoned it for specialists.

The Alabama cases, in terms, continue to apply the general test laid down in cases decided many years ago. *Orange v. Shannon,* 284 Ala. 202, 206, 224 So.2d 236:

"In operating upon or treating a patient, a surgeon's duty is to bring to the service and to exercise such reasonable care, diligence, and skill as physicians and surgeons in the same general neighborhood, in the same general line of practice, ordinarily have and exercise in a like case. Neither a physician nor a surgeon is an insurer of the successful issue of his treatment or service."

The test for hospitals, too, continues to speak of the "community." *Cooper v. Providence Hospital,* 272 Ala. 283, 285, 130 So.2d 8:

"The measure of duty owed by the defendant to the plaintiff's intestate was that degree of care, skill, and diligence used by the hospitals generally in the community and by the express or implied contract of the undertaking."

Again in *Parrish v. Spink,* 284 Ala. 263, 266, 224 So.2d 621, the court expounded the same test:

"In attending a patient a physician or surgeon undertakes to exercise that degree of care and skill as physicians and surgeons in the same general neighborhood, pursuing the same general line of practice ordinarily exercised in like cases."

Moreover, the Alabama Supreme Court has recently held that proof of negligence may not be shown by simply showing an unfortunate result and that the doctrine of *res ipsa loquitur* does not apply. Expert testimony is required as proof of what is or is not proper practice, treatment or procedure. *Berry v. Robertson,* (Ala.)

Thus, as I have said, the Alabama courts have not rejected the locality rule, and it is possible to argue that the articulation of the standard of care in very recent cases uses the same locality rule language which has appeared in Alabama cases decided many years ago. But the Alabama Supreme Court has not had occasion to consider and decide the policy arguments which were meaningful to the Massachusetts court and which caused a decision to reverse the earlier test.

Galen And The Pulse

Delicate and difficult as was the task of measuring the pulse in Galen's time, he was clever enough to anticipate by 17 centuries some of the tests which modern psychologists have urged that should be applied in criminal trials. He detected the fact that a female patient was not ill but in love by the quickening of her pulse when someone came in from the theater and announced he had seen Pylades dance. When she came again the next day Galen had purposely arranged that someone should enter and say that he had seen Morpheus dancing. This and a similar test on the third day produced no perceptible quickening in the woman's pulse, but it bounded again when on the fourth day, Pylades' name was again spoken.

—Thorndike's History of
Magic and Experimental Sciences

True Science teaches us to doubt and in ignorance to refrain.

—Claude Bernard

Right Of Action For Injury To, Or Death Of A Woman Who Consented To Abortion

Douglas Evans, J. D.
Director, Legal Legislative Affairs

The question for discussion here is whether the consent of a woman to an abortion operation precludes recovery by her or her representative in an action brought for the injury or death of the woman resulting from such abortion.

I. The view denying recovery.

There is a sharp conflict of authority on the question whether the consent of a woman to an abortion precludes a recovery, either in tort or in contract, on the ground of the illegal transaction.

In those cases where recovery is denied, the reasoning of the courts is generally based on the premise that the female was either an accomplice in the crime of abortion or was a willing participant therein, and, having taken part in an immoral and illegal transaction, is barred from maintaining an action arising out of such transaction, whether such action be based upon tort or upon contract.

The Alabama Courts have apparently not passed on the question whether a physician may be held liable in damages for negligence in the performance of an illegal abortion to which a woman gave her consent. However, an Alabama case close in point is *Hancock V. Hullett.* In that case, a father brought an action against a physician for an unlawful abortion committed on his minor daughter, 17 years old, resulting in permanent injuries and substantial expenses for medical attention. As to the objection that evidence was excluded, tending to show that the daughter consented to the operation, the court stated: "To produce an abortion is a criminal offense, and the plaintiff's minor daughter was incapable of consenting thereto legally; and her consent thereto would in no manner have affected the charge in this complaint that it was wrongfully and unlawfully done." If this case was followed today, it seems that there would be liability.

However, many states hold to the view denying recovery. In a Tennessee case, a tort action by a woman to recover for injuries sustained by reason of an abortion operation was dismissed, the court reasoning that it would not lend its support to an action based upon an immoral and illegal transaction. In Massachusetts, an action to recover for the death and suffering of a woman resulting from an abortion operation was brought, the plaintiff alleging that the act was negligently performed. The Massachusetts Court held that the voluntary participation of the decedent in a transaction prohibited by law precluded recovery for damages arising out of such transaction. Similarly, in Kentucky the Supreme Court in that State held that a woman had no cause of action against persons who were not responsible for her pregnancy, but who allegedly induced her to submit to an abortion operation, where the plaintiff voluntarily sought the treatment upon which she based her action for assault and battery. In that case the Court said: "While we readily appreciate the argument that, so far as the State is concerned, no consent can be pleaded in justification, we have not been able to understand how, in a civil suit, in which the party consenting alone is interested, compensation can be allowed by the law. If both parties to the action are violators of the law, must the mouth of one be closed and the complaint of the other be heard?" Other states, such as Oklahoma, Virginia, Washington, and the District of

(Continued on Page 337)

Drip stopped, Congestion cleared

For upper respiratory allergies and infections, up to 12 hours clear breathing on one tablet. Dimetapp Extentabs® do an outstanding job of helping clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely.

INDICATIONS: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, rhinitis, conjunctivitis, and otitis. CONTRAINDICATIONS: Hypersensitivity to antihistamines. Not recommended for use during pregnancy. PRECAUTIONS: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. SIDE EFFECTS: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. DOSAGE: 1 Extentab morning and evening. SUPPLIED: Bottles of 100 and 500.

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

Dimetapp® Extentabs

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg; phenylpropanolamine HCl, 15 mg

when an unnerving experience compounds the pain

the compound analgesic that calms instead of caffeinates

In addition to pain, this patient has experienced anxiety, fear, embarrassment, and frustration. No doubt these psychic factors actually increased her perception of pain. Surely the last thing she needs is an analgesic containing caffeine. The logical choice is Phenaphen with Codeine. It provides a quarter grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can control the pain more effectively. It's no accident that the Phenaphen formulations contain a sedative rather than a stimulant. Don't you agree, Doctor, that psychic overlay is an important factor in most of the accident cases you see?

Phenaphen®

with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming). **Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.
A. H. Robins Company, Richmond, Va.

A·H·ROBINS

(Continued from Page 334)

of Columbia hold to the view denying recovery.

II. View permitting recovery.

In those cases in which it has been held that recovery could be had by a female or her representative in an action based upon an abortion operation, notwithstanding her consent thereto, the grounds for recovery have been predicated upon various lines of reasoning.

In Ohio, the administrator of a woman who died as a result of an abortion operation was permitted to recover damages from the physician who performed the illegal operation, the Court holding that the consent of the person injured by an unlawful act will not preclude recovery where such act involves a violation of the public peace or the life of the person involved.

In an Indiana case, the administratrix of the estate of a woman who died as a result of an illegal abortion performed upon her by the defendant physician was permitted recovery both against the physician and the woman's seducer. As far as can be ascertained from the report of the case, the deceased woman went to the doctor's office voluntarily but the court did not consider the question of consent in holding that a cause of action existed for the death of the woman.

Also, in Maine a husband was permitted to recover damages against one who allegedly, negligently and unskillfully performed an illegal abortion upon his wife despite the fact that the wife apparently submitted to the operation voluntarily.

III. Validity and Reality of Consent: Fraud or Conspiracy.

It would seem clear that a woman's submission to an abortion operation would not preclude an action based thereon, where there is no real consent on her part for the illegal transaction, as where it is induced by fraud or the like.

For example, in Indiana a young woman was permitted to recover damages resulting from two abortions performed upon her by the defendant physician acting under the direction of the woman's seducer. In that case it was alleged that the plaintiff submitted to the illegal operations because of the representations of the defendants to the effect that such operations were necessary to save her life.

The aforementioned Alabama case of *Hancock v. Hullett* would fall under this section. In that case the daughter's consent to the operation was not valid since she was a minor and could not legally consent to a transaction which constituted a criminal offense. Attention is also called to a recent Kansas case in which the decedent, in an action for death from abortion, was held not to have consented to an illegal operation in the manner in which it was performed, and therefore her right of action for damages survived to the next of kin.

"This Is Election Year"

Two brief paragraphs compose an editorial by George H. Mills, M. D., president of the Hawaii Medical Association:

"This is election year. Nearly all important candidates of the national, state and county level will be on the ballot. Now, health care is one of the nation's greatest political issues. Join the party of your choice!

"Support qualified candidates with contributions to their campaigns and work on the precinct level. I am sure we have all learned by now the penalty of not participating."

Probably the majority of discoveries in biology and medicine have been come upon unexpectedly or at least had an element of chance in them, especially the most important and revolutionary ones.

—W. B. Beveridge

The Month in Washington

From the Washington Office
American Medical Association

The American Medical Association emphasized that the quality of medical care should not be sacrificed for the sake of economy in government health care programs.

Dr. William O. LaMotte Jr., of Wilmington, Del., chairman of the AMA's Council on Legislation, repeatedly stressed the importance of assuring high quality care in testimony at a Senate Finance Committee hearing on proposed changes in medicare and medicaid.

He also pointed out the advantages of the AMA's plan for review of physicians' services aimed at holding down costs over an alternative proposal before the committee. The AMA supported a provision of the proposed legislation that would provide for physical therapy services but opposed including chiropractic services under medicare.

Dr. LaMotte said that there should be pilot projects before a "Health Maintenance Organization" program is started nationwide. A HMO would provide both hospitalization and physicians' services for medicare patients for a set per capita amount.

"To this point of quality care, we have one additional concern. As defined in the bill, the HMO may be a 'for-profit' organization and one managed, controlled and operated by lay individuals. Under such circumstances, the incentive for profit and/or lack of the basic essentials of knowledge, training and experience in medical matters could result in the patient being furnished less than the optimum of quality care. To avoid such a result, we recommend that organizations delivering health care should be under the control and guidance of medical personnel."

Dr. LaMotte assured the committee that the nation's physicians as a group "share the concern of the public and the Congress" in rising health care costs. But, he said, the AMA must oppose a provision that would substitute an arbitrary statutory limitation on physicians' fees for the "reasonable" fee now allowed. He said that the arbitrary limitation would make the medical profession the only sector of the nation's economy under price or wage controls.

As for utilization or peer review, Dr. LaMotte said the AMA objects "most forcefully" to a provision of the pending legislation that would have non-medical groups act as review teams and pass judgment on medical services.

Following Dr. LaMotte's testimony, the committee modified somewhat the professional review amendment.

The modified version relaxed a requirement for pre-admission clearance to hospitals for elective surgery to leave the matter of such a requirement up to review agencies. But the committee version would permit the Secretary of Health, Education and Welfare to enter into agreements with organizations or agencies other than state medical societies for administering the review programs in areas of 300 or more physicians. The AMA contended strongly that the responsible agencies should be only state medical societies.

The AMA—along with the carriers and HEW—opposed mandatory reporting by carriers of unassigned payments, on the grounds that it would be difficult and costly to furnish data and that the patient might not have passed along the payment to the physician. This could put on the physician the burden of proving that he did not receive such income.

(Continued on Page 341)

THE LEADING MANUFACTURER
OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

FREE CLINICAL SUPPLY

PLASTIPAK
INSULIN SYRINGE/NEEDLE UNITS

Send samples to:

Name _____
(Physician's Signature

Address _____

City _____ State _____ Zip _____

Clip out postcard on dotted line . . . no stamp required

Now you can lower the risk of insulin error when your patient is home . . . and alone

B-D

SINGLE-USE
PLASTIPAK
INSULIN SYRINGE/NEEDLE UNIT

8401
RED CAP u40

8406
GREEN CAP u80

as specific as insulin itself

Postage will be paid by Addressee

No postage stamp necessary if mailed in the United States

BUSINESS REPLY MAIL
First Class Permit No. 134, Fairview, N.J.

Becton-Dickinson and Company
Consumer Products Division
P.O. Box 183
Fairview, New Jersey 07022

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

Clip coupon on dotted line . . . fill out other side send for physician's free samples

color-coded caps and numbers—red for U40, green for U80

presterilized—consistently dependable, and sterility is assured until cap is opened

easy-to-hold, easy-to-handle—even for child diabetics with small hands or adults with stiff fingers

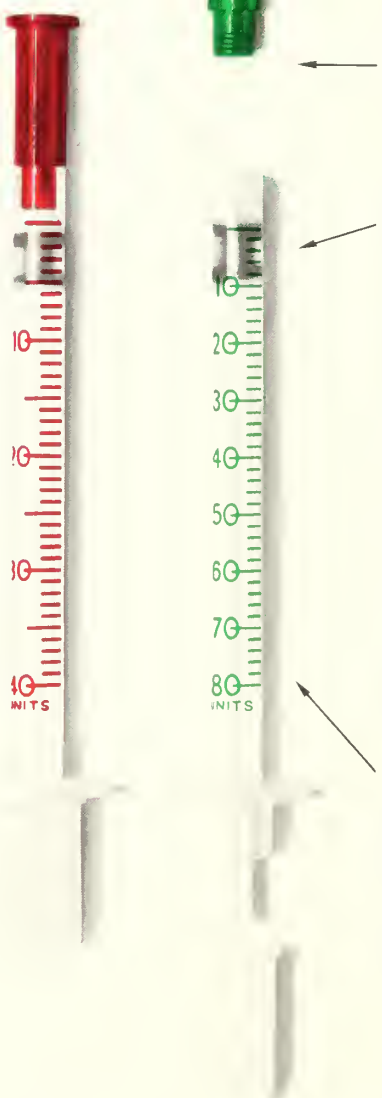
the sharpest needle your patient can buy—far sharper than any reusable needle

pocket-or-purse portable—sturdy from tip to top

integral cannula reduces air bubbles

single-scale PLASTIPAK insulin syringe needle units eliminate the hazard of reading the wrong scale

the first insulin syringe so low in cost your patient can use a new one every time



its single-scale—U40 or U80—minimizes the risk of measurement errors. Your patient can't read the wrong scale.

low cost—barely pennies higher than old-fashioned disposable needles without syringe . . . about as low as a cup of coffee

big numbers, wide spaces for easy reading

Supplied: in packages of 10—PLASTIPAK syringe U-40 (red) or PLASTIPAK syringe U-80 (green) Prescription required in most states.

U40 **U80**

ECTON B-D
ICKINSON
nsumer Products Division
cton, Dickinson and Company
herford, New Jersey 07070

(Continued from Page 338)

Council for IRS said the Internal Revenue Service had found that more than half of 3,000 physicians who received $25,000 or more in government medicare or medicaid payments in 1968 failed to report a substantial amount of their income to the tax agency.

Preliminary results of IRS audits indicate a number of instances of substantial unreported income, including some where the omission exceeds $100,000.

The committee had turned over to the IRS the names of 11,000 doctors who had received medicare or medicaid payments exceeding $25,000 in 1968. 4,000 of the 11,000 doctors "justified detailed audit" and 3,000 of the audits were nearly complete, and about half of the 3,000 will come up with substantial deficiencies in reported income, according to IRS officials.

Sen. Russell B. Long (D., La.) said the investigation had disclosed a "vast area of tax cheating" . . .

However, Long agreed with the AMA as to NOT including chiropractic services in the medicare program. He told a chiropractic spokesman testifying before the committee:

"Insofar as you can convince me that you are doing somebody some good, I would be willing to cooperate, but I am not inclined to cooperate when I am not convinced that you have. My feeling is the only time a chiropractor tried it on me it didn't do any good, so I guess I am prejudiced by that."

* * *

The Nixon Administration came out strongly against the cradle-to-grave comprehensive national health insurance legislation sponsored by Sen. Edward M. Kennedy (D., Mass.) and supported by organized labor leaders.

John G. Veneman, Under Secretary of Health, Education and Welfare, testified before the Senate Committee on Labor and Public Welfare, that the program that would be provided by the legislation "is not a proper or workable approach to the solution," and would cost $77 billion in the first year of full operation.

The committee held hearings on the legislation this year only to publicize it and to provide a forum for its supporters to expound their views.

"There are those who insist that the present system is sound and should be left alone," Veneman said. "Others demand that we throw out the baby with the bath water and replace our pluralistic health enterprise with some monolithic scheme in which the Federal Government controls everything.

"I think both points of view are wrong. The deep troubles of the health care enterprise have been nurtured by many factors, not the least of which is past failure to plan and prepare for the soaring demand that observant people knew was coming. But I do not believe that past neglect means that we now have to start over . . ."

"The central issue, . . . is whether such a drastic abandonment of existing mechanisms in our health care system is necessary to remedy the defects in the system.

"Government is currently purchasing more than 36% of the total output of the health care system. As government becomes more involved in financing it also has a greater responsibility to remedy the defects in the system.

"The question now is whether we should divert revenues needed for income maintenance, nutrition, the environment, housing and other health-related efforts, and concentrate them all on creating the federal system of health financing proposed by S. 4323. To do so would assume the failure of the measures currently proposed to correct defects in the present mixed public-private health system.

"However, we have serious reservations about the desireability of embarking on a program like S. 4323."

Fathers and Sons in Medicine

The Chenaults Of Decatur-- Three Generations

Robert E. Lee's grandfather spelled his name Leigh. Claire Lee Chennault's grandfather spelled his name with one "n," Chenault. Without knowing these two facts of history, one would never suspect that these two military geniuses of 75 years apart have a place in the family tree of one of the illustrious medical families of present-day Alabama. There is a line of Baptist ministers in the family too, reaching back to colonial Virginia.

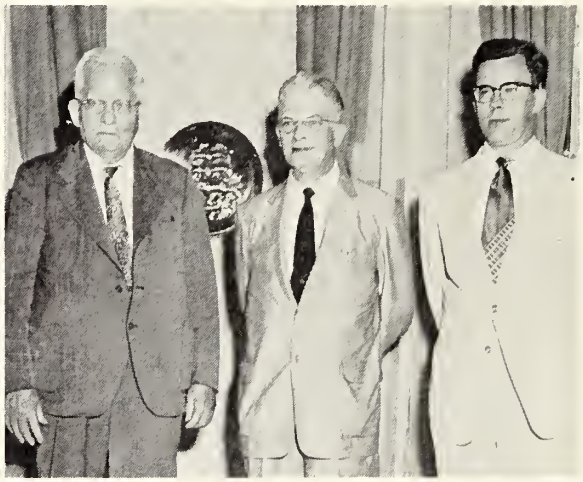
The line of Chenault doctors began on Sunday, Dec. 29, 1867, with the birth of Calvin Sidney Chenault, the son of Martha (Leigh) and John Murphy Chenault. This was when his kinsman, Robert E. Lee, was president of the school that is today Washington & Lee. The future Dr. C. S. Chenault would be approaching his 21st birthday when his kinsman, the Chennault destined to command the famed Flying Tigers, was born.

Dr. Chenault received his baccalaureate from State Normal, Florence, before going on to Birmingham Medical College for his degree in Medicine. Subsequently he entered into partnership with his brother, Dr. Frank Leigh Chenault, for the general practice of medicine and surgery in what was then New Decatur, Ala.

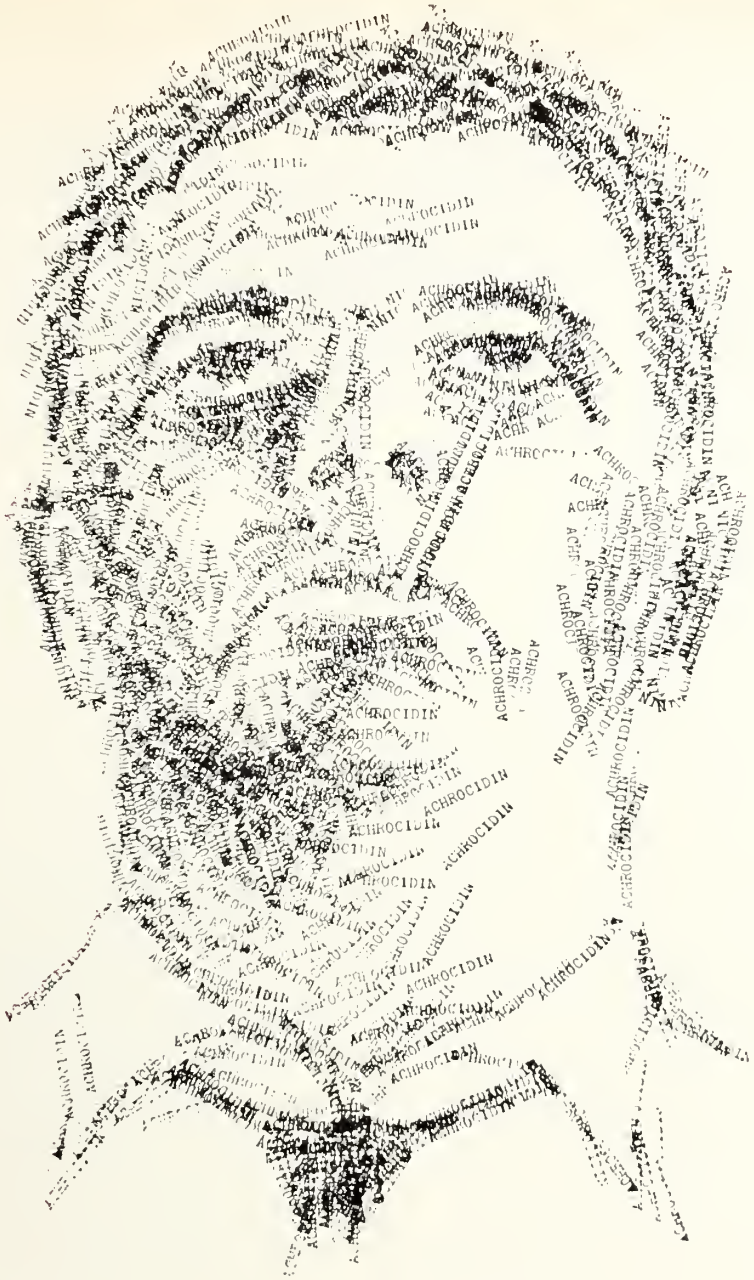
Dr. C. S. Chenault was married Dec. 27, 1899, to Mary Ellen Osborne, daughter of James Osborne, Franklin County planter. And one of their two sons to survive infancy was Erskine Murphy Chenault, born Dec. 8, 1900, and destined to be the second of three generations in medicine.

Dr. Erskine was born near Hillsboro, graduated from High School in Albany, a part of present-day Decatur, in 1918; worked in summers for the L. & N. railroad, 12 hours a day, seven days a week; entered the University of Alabama in the fall of 1918, transferring to Vanderbilt three years later, from where

(Continued on Page 345)



THREE GENERATIONS IN MEDICINE—Dr. Frank Leigh Chenault (MASA President in 1956), Dr. Erskine Murphy Chenault, Dr. Sidney Blair Chenault, in that order. . . . In the second picture, father and son, Drs. Erskine and Sidney, examine the saddlebags of Dr. Sidney's grandfather, which accompanied the late Dr. Calvin Sidney Chenault on many a journey of life or death, packed with medicines and instruments.



Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965 535-9

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

(Continued from Page 342)

he received his M. D. degree in 1925. He externed at Davidson County Tuberculosis Hospital, interned at Vanderbilt, and returned to Decatur to enter practice with his father and his uncle, Dr. Frank Leigh Chenault, the latter to become president in 1956 of the Medical Association. All three were destined to become Life Counsellors.

Dr. Erskine Chenault was married June 29, 1926, to Julia Blair, and they have two children, a daughter, who is today Mrs. W. B. McBride, and a son, Sidney Blair Chenault, third in the father-and-son line. He received his baccalaureate from the University of Alabama, and his M. D. degree from Vanderbilt in 1951.

Dr. Sidney Blair Chenault's internship and residency at the University of Alabama were interrupted by a tour of duty with the U. S. Air Force at Ogden, Utah, but in 1958 he entered practice in Decatur with his father, Dr. Erskine M. Chenault; his great-uncle, Dr. Frank Leigh Chenault; and his cousin, Dr. John M. Chenault, who is today Chairman of the Board of Censors, governing body of the Medical Association. Mrs. John Chenault, incidentally, is the former Belle Montgomery of Tuscaloosa, immediate past President of the Woman's Auxiliary to the American Medical Association, and now a member of the board of the American Medical Political Action Committee.

Dr. Sidney is married to the former Frances Gwaltney of Gallatin, Tenn., and they have three sons—William, Dan, and David—any one, or all three of whom may be prospects for the fourth generation of this family in medicine. Like his father, Dr. Sidney Chenault is a Rotarian, and a member of Pi Kappa Alpha social and Phi Chi medical fraternities.

W. J. M., Jr.

"I have never found in a long experience with politics, that criticism is ever inhibited by ignorance."

—Harold Macmillan

Sovietizing Medicine

One of the numerous plans for the extension of government control in the health care field recommends the expansion of medicare to include all Americans by 1973. The cost of the plan by 1975 is estimated at $22.7 billion a year. The actual cost would be anybody's guess considering the financial state of present health programs such as medicaid.

The striking thing about the scheme to extend medicare to all Americans by a certain deadline is its resort to a system of compulsion and directives. Physicians' fees would be set at "appropriate" and "reasonable" levels, and physicians would be required to meet certain qualifications. Any physician failing to meet such standards would not be recognized. The heavy hand of government would be felt by patient and physician alike.

In reading details of the plan, one recalls with chilling clarity a feature article in Life magazine several months ago on the Soviet medical system which Life called, "The World's Most Socialized Medicine." Even to the layman, the story in Life reveals a medical system that in many aspects is half a century or more behind the U. S. Commenting on the Soviet system, Life said, "To achieve quantity, the quality of treatment often suffers. Hospital sanitation is spotty at best. Anesthetics and modern equipment are often unavailable and most advanced drugs have to be imported . . . Medical education . . . is not up to U. S. standards."

The basic tenet of Soviet medicine is willing acceptance of compulsion and the state decree. These same factors are present in the plan to extend medicare to all Americans by 1973. Is this the kind of medical system U. S. citizens want? It hardly seems likely.

—Nevada State Journal

Hobbies To Fill A Doctor's Leisure

Bronzes At Home, Pictures Abroad For Hobby Fun

A surgeon as skilled with a pen as with a scalpel, who has hunted big game around the world armed with a loaded camera, and who thanks a mild cardiovascular accident for the time to pursue his hobby, is this month's subject of "Hobbies to Fill a Doctor's Leisure."

Out-of-the-ordinary is a label to be attached to Harold Ewart Simon, M. D., Birmingham, without possible challenge. In some respects he is unique.

Born on Thursday, May 27, 1897, Dr. Simon must wait only a year and a half to qualify for MASA's 50-Year Club. But he is also good at waiting. As a matter of fact he waited until he was 54 years old to take unto himself a bride, the former Regina Pessemier of Saint Marys, Kan.

A native Pennsylvanian, the subject is an alumnus of the University of Pittsburgh, from which he received his M. D. degree in 1922, went to Mayo Clinic on a five-year Fellowship in Surgery, and in 1928 earned his M. Sc. degree in Surgery from the University of Minnesota.

Dr. Simon moved south to Birmingham in the year of the Great Depression, 1929, where he established with Dr. Byrn Williamson the Simon-Williamson Clinic, of which he was senior surgeon until his retirement in 1962. Meantime, as World War I had interrupted his education, serving as an enlisted man through it, World War II had segmented his practice, and he served from 1941 to 1945, emerging as an Air Corps lieutenant colonel.

For many years Dr. Simon had promised himself retirement at the age of 65, but as he approached that self-appointed terminal in apparent robust health, he decided to forget that promise. A Divine Providence determined otherwise. A mild CVA booted him into retirement, temporarily into bed, and he and Mrs. Simon have pursued their shared

HUNTING WITH A LOADED CAMERA is a hobby to occupy Dr. and Mrs. Harold E. Simon, of Birmingham, shown in their library planning the next trip to some remote corner of the world. Between them, in back, is a Remington bronze, "The Outlaw." . . . Immediately beneath them is a wild African elephant, caught in their camera lens on a jungle safari. . . Below that, Mrs. Simon caught the look of wonderment on two New Guinea natives' faces as they looked up to the mighty "wind bird" on which they arrived. . . Lower left is a close-up of Dr. Simon, and lower right is another Remington bronze.

enthusiasm for travel and photography ever since.

Though travel has yielded them education, fun and sometimes adventure, not entirely untouched by tragedy, the best part of any trip "is the return home to Birmingham."

Some of their adventures have been recounted eloquently in pictures and articles in such magazines as the *Journal of the Photographic Society of America, Medical Economics, National Wildlife Magazine, The Bulletin of the Birmingham Zoo*, and others. But in their home is the cream of their experiences, including:

A spectacular collection of Western Bronzes, with emphasis on Frederic Remington (they have nearly half of his original castings of his bronzes), paintings, and memorabilia recalling such happenings as:

Their travels to Morocco, through Africa, Iceland, to countries fringing the Himalayas, and such adventures as being charged by a wild elephant when their Land Rover stopped in Manyara National Park, dining as guests of the Mayor of Agiz, Morocco, emergency surgery on a woman as she lay unconscious under the tail of a whale at the water's edge where she had fallen from an observation platform, a climb to the high gate of the Taj Mahal in India for a notable photograph, and caring for the widow of a traveling companion who died of an acute CVA at Victoria Falls, Rhodesia. The four of them had been on an 8,000-mile drive from Cape Town, South Africa, to Mombasa in Kenya, East Africa.

The Simons' pursuit of their twin hobbies —travel and photography—are proof of the cliche, that truth is stranger than fiction.

W. J. M., Jr.

Longevity is worth having only when it is accompanied by the temperamental harmony which makes its possessor, even in extreme old age, take delight in the sheer joy of living.

—Forbes Gray

The Pendulum Swings Left

To lift the heart out of the editorial of Ben M. Miller, M. D., 1970-71 president of the South Carolina Medical Association:

"In my time there have been many radical changes and reforms and like the old cronies in the English House of Lords, 'we have been against them all.'

"The state has become socialistic. A controlled economy has leveled out the swing from inflation to recession without the devastating valleys of depression. Social Security has enforced savings for retirement in segments of the population not prone to be frugal.

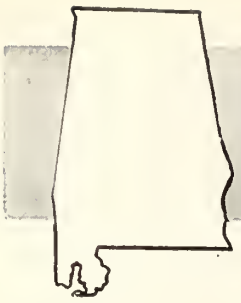
"Socialism made deep inroads into health care in the 1960s. Medicare and Medicaid—Titles XVIII A and B and Title XIX became a reality. HEW, under the President's direction, now proposes an extension of Title XVIII to include preventive care, Part "C." Guaranteed minimal income, constituting income tax in reverse, is in the offing.

"Organized medicine, through AMA direction, is offering an alternative to further federal government invasion into the health insurance field. The concept of Medicredit would allow tax credit for premiums paid by individuals to private health insurance carriers."

Hospitalization Liberalized

Veterans 65 years of age or older no longer have to disclose financial details to be admitted to a Veterans Administration hospital. Previously this information was required from all veterans who did not have a service-connected disability and were not drawing a pension. Veterans in this age group need only to certify that they are unable to pay for needed hospital or domiciliary care and for transportation for nonservice-related medical conditions.

—*Medical Annals of the District of Columbia*



around the state

Vital Statistics

NEW MEMBERS

Houston County

Banning, Philip Guy, b 36, mc Western Reserve 63, recip. Ohio 70, 509 West Main Street, Dothan, Alabama 36301. Or.

Madison County

Liddon, Sim Clark, b 35, mc Johns Hopkins 61, recip. Maryland 70, 500 Lowell Drive, Huntsville, Alabama 35801. P.

Marshall County

Brown, Dennis Albert, b 30, mc Louisville 59, recip. Kentucky 70, 827-8th Street, N. E., Arab, Alabama 35016. R.

Finlay, Andrew Grout, Jr., b 37, mc Tulane 63, recip. La. 70, Boaz-Albertville Medical Center, RFD No. 5, Boaz, Alabama 35957. I.

Johnston, Flemon Carden, Jr., b 36, mc Alabama 61, sb 62, 723 Broad Street, Guntersville, Alabama 35976. Pd.

Monroe County

Simmons, Albert Grayson, b 38, mc Alabama 65, sb 66, 1116 South Alabama Avenue, Monroeville, Alabama 36460. S.

MEMBERS DECEASED

Jefferson County

Odom, Henry Grady, Irondale, Alabama ..... Deceased 7/26/70

Talladega County

Vaughn, Max Eldred, Sylacauga, Alabama ..... Deceased 8/31/70

CHANGES OF ADDRESS

Calhoun County

Stallworth, Nicholas Robert, present Jacksonville, Alabama to 822 Leighton Avenue, P. O. Box 2123, Anniston, Alabama 36201

Clarke County

Rudder, William Harwell, present Jackson, Alabama to 308 Dogwood Drive, Jackson, Alabama 36545

Escambia County

Monzingo, George Franklin, present Enterprise, Alabama to P. O. Box 956, Brewton, Alabama 36426

Houston County

Byrd, Ben Ralph, present Dothan to 1920 Fairview Avenue, Dothan, Alabama 36301

Pope, David Hyatt, present Dothan to 1920 Fairview Avenue, Dothan, Alabama 36301

Jefferson County

Abele, Henry Byrne, present Huntsville to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Bancroft, Josiah Dozier, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Bennett, Austin L., III., present Birmingham to 1318 South 19th Street, Birmingham, Alabama 35205

Blanton, James Henry, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

(Continued on Page 351)

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

(Continued from Page 348)

Burrett, John Barton, present Birmingham to 1320 South 19th Street, Birmingham, Alabama 35205

Campbell, Ernest Sheppard, Jr., present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Campbell, Lamar McWhorter, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Carmichael, Robert Glenn, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Carter, John Carson, present Birmingham to 924 South 18th Street, Birmingham, Alabama 35205

Cezayirli, Cemil, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Clayton, Orville Woolford, present Birmingham to 1318 South 19th Street, Birmingham, Alabama 35205

Donald, Charles Johnson, Jr., present Birmingham to 1318 South 19th Street, Birmingham, Alabama 35205

Donald, Joseph Marion, Jr., present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Elmore, John Durr, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Ford, Robert Grant, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Funderburg, Lonnie William, present Birmingham to 701 Princeton Avenue, S. W., Birmingham, Alabama 35211

Hazelrig, Cooper Green, present Birmingham to 1320 South 19th Street, Birmingham, Alabama 35205

Herlihy, Charles Edward, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Holt, Ira Hawkins, present Fairfield to P. O. Box 710, Bessemer, Alabama 35020

Johnson, James Curtis, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Jordan, John S., Jr., present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Langdon, Harold R., present Birmingham to Box 428, Bynum, Alabama 36253

Miles, Nathan Edgar, present Birmingham to 1016 South 18th Street, Birmingham, Alabama 35205

Morgan, Cecil, Jr., present Fairfield to 208 Medical Arts Building, Birmingham, Alabama 35205

Nuckols, Frank J., present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Paul, Thomas Otis, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Peacock, Thomas H., present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Pearson, Robert Sydney, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Phillips, Robert D., present Fairfield to 4130 South Halstead Street, Chicago, Illinois 60600

Ritchey, Hardin M., present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Seibold, James L., present Birmingham to 2315 South 20th Avenue, Birmingham, Alabama 35223

Silberman, Donald J., present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Stephens, Albert B., Jr., present Birmingham to 1529 North 25th Street, Birmingham, Alabama 35234

Thomas, Henry Duke, present Birmingham to 1320 South 19th Street, Birmingham, Alabama 35205

Ward, James Keene, present Birmingham to Professional Office Building, 800 Montclair Road, Birmingham, Alabama 35213

Windsor, James L., present Bessemer to 705 Memorial Drive, Bessemer, Alabama 35020

Yoe, Robert H., Jr., present Birmingham to 1320 South 19th Street, Birmingham, Alabama 35205

Lee County

Bruce, James F., present Opelika to White Road, Opelika, Alabama 36801

Madison County

Broyles, John Alfred, III., present Ft. Knox, Kentucky to Fox Forest Drive, Route 2, Lilburn, Georgia 30247

White, Morris Wayne, present Huntsville to 204 Governors Drive, S. W., Huntsville, Alabama 35801

Marion County

Crenshaw, Francis Moody, present Hamilton to 5903-19th Avenue, Meridian, Mississippi 39301

Morgan County

Pitt, McCoy Bonnie, present Decatur to P. O. Box 1768, Decatur, Alabama 35601

Talladega County

Brasfield, Milton Stanhope, III., present Sylacauga to P. O. Box 255, Alexander City, Alabama 35010

Tuscaloosa County

Oldshue, Isabel Barker, present University to 233 Cedar Crest, Tuscaloosa, Alabama 35401

CHANGES OF SPECIALTIES

Jefferson County

Baxley, William A., University of New Mexico, Albuquerque, New Mexico 87106. C

Lyons, James A., Jr., 1202-13th Ave. S.E., Decatur, Alabama 35601. ALR

Mobile County

Brown, Charles H., 1720 Springhill Avenue, Mobile, Alabama 36604. I-GE

MEMBERS REINSTATED

Clarke County

Kimbrough, James Edward, b 21, mc Alabama, 52, sb 53, P. O. Box 637, Grove Hill, Alabama 36451.

CHANGES OF OFFICERS

Clarke County

William H. Rudder, M. D., has resigned as president. William deShazo, M. D., has been named president to fill the vacancy.

Crenshaw County—Board of Censors

James C. Ray, M. D., Chairman; R. F. Dodds, Desire V. Vanderhoeven and J. E. Kendrick.

MEMBERS TRANSFERRED

Etowah County

Brown, Andrew M., 515 S. 3rd St., Gadsden, Alabama from member Jefferson County Medical Society to member of Etowah County Medical Society. ALR

Mobile County

Rutherford, Charles L. Jr., 1720 Center Street, Mobile, Alabama from member Jefferson County Medical Society to member of Mobile County Medical Society. U

(Continued on Page 354)

The pain of arthritis

relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF

Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.

Available: Bottles of 12, 36 and 60 tablets

(Continued from Page 352)

MEMBERS TRANSFERRED

Escambia County

Monzingo, George Franklin, P. O. Box 956, Brewton, Alabama from member Coffee County Medical Society to member of Escambia County Medical Society.

Morgan County

Lyons, James Aaron, Jr., 1202-13th Avenue, S. E., Decatur, Alabama from member Jefferson County Medical Society to member of Morgan County Medical Society. ALR

Washington County

Webb, Virginia Eugenia, Calvert, Alabama from member Clarke County Medical Society to member of Washington County Medical Society. PH

NEW TELEPHONE NUMBERS

Abele, Henry Byrne, Birmingham 595-8976

Bancroft, Josiah Dozier, Birmingham 591-2565

Banning, Philip Guy, Dothan 794-2791

Bennett, Austin L., Birmingham 933-2190

Blanton, James H., Birmingham 591-2565

Brasfield, Milton S., III., Alexander City 329-9970

Brown, Dennis Albert, Arab 582-5671

Bruce, James F., Opelika 745-3142

Burrett, John B., Birmingham 933-2640

Byrd, Ben R., Dothan 794-4554

Campbell, Ernest S., Jr., Birmingham 591-2565

Campbell, Lamar M., Birmingham 591-2311

Carmichael, Robert G., Birmingham 591-2301

Cezayirli, Cemil, Birmingham 328-0129

Clayton, Orville W., Birmingham 933-2190

Donald, Charles J., Jr., Birmingham 933-2190

Donald, Joseph M., Jr., Birmingham 595-9051

Elmore, John D., Birmingham 328-2054

Finlay, Andrew Grout, Jr., Boaz 593-8114

Ford, Robert G., Birmingham 591-2301

Funderburg, Lonnie W., Birmingham 787-2361

Hamilton, Longstreet Cavett, Fairhope 928-7205

Hazelrig, Cooper G., Birmingham 933-2640

Henderson, Hiliary Herbert, Jr., Birmingham 933-6485

Herlihy, Charles E., Birmingham 328-2055

Herren, Wood S., Birmingham 933-2660

Holt, Ira H., Bessemer 428-9171

Johnson, James C., Birmingham 591-2565

Johnston, Flemon Carden, Jr., Guntersville 582-2501

Jordan, John S., Jr., Birmingham 595-4697

Langdon, Harold R., Bynum 238-1126

Larrimore, Lennox Wilson, Thomasville 636-4475

Lewis, Irwin, Birmingham 328-8298

Liddon, Sim Clark, Huntsville 539-6527

McCue, Patrick, Roanoke 863-2151

Meadows, Henry Howard, Jr., Hayneville 548-2333

Merkle, Bobby Charles, Uniontown 628-2761

Miles, Nathan Edgar, Birmingham 252-7154

Morgan, Cecil, Jr., Birmingham 322-8098

Naramore, Malta L., Jr., Birmingham 933-0861

Nash, James Carroll, Jr., Mt. Vernon 829-2811

Neighbors, Jacob A., Birmingham 786-6872

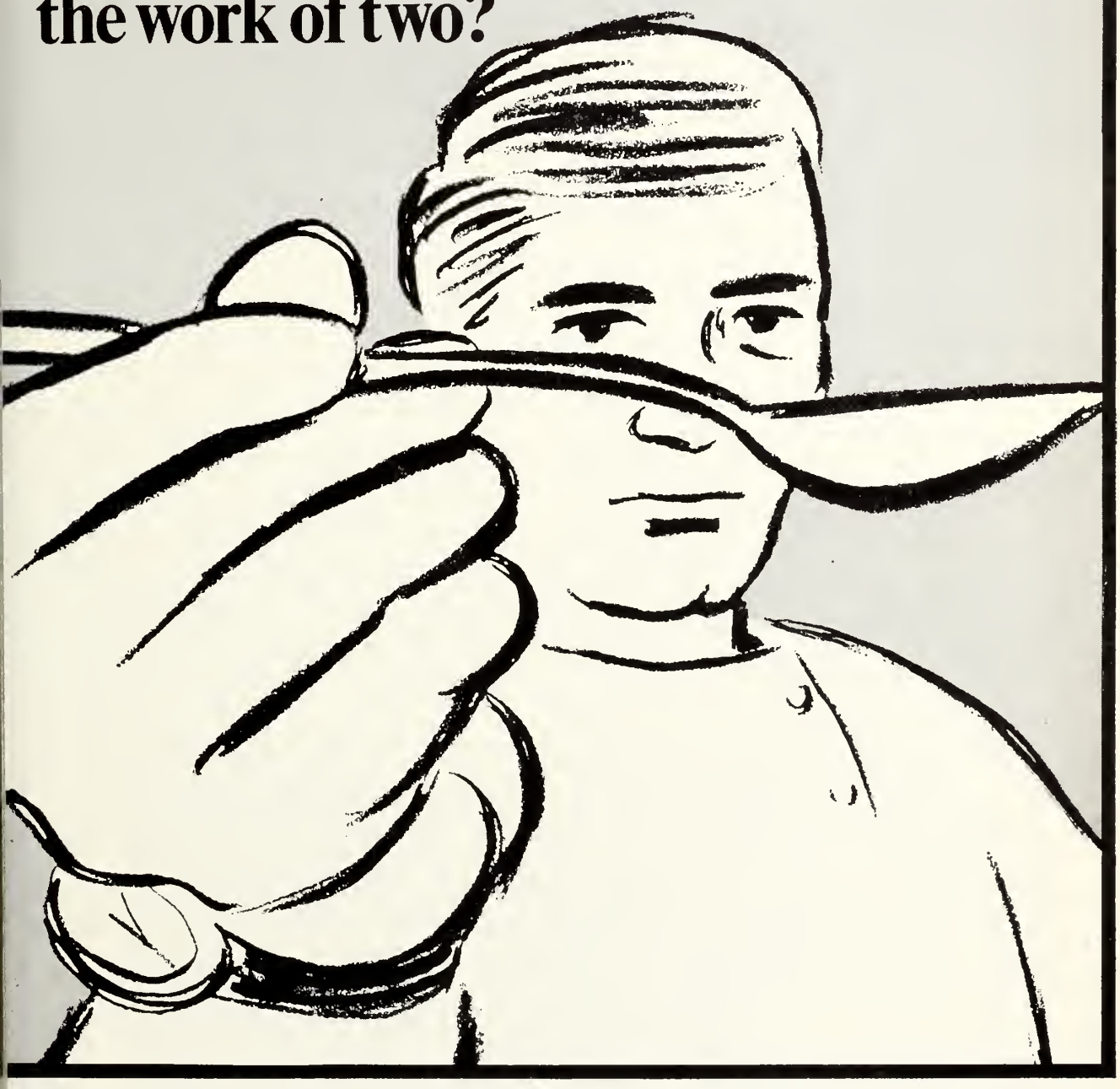
Nuckols, Frank J., Birmingham 595-8976

Paul, Thomas O., Birmingham 591-2311

Peacock, Thomas H., Birmingham 595-9051

(Continued on Page 356)

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

0-2102 (1832)

(Continued from Page 354)

Pearson, Robert S., Birmingham 591-2311

Pope, David H., Dothan 794-4554

Risman, George C., Birmingham 879-8683

Ritchey, Hardin M., Birmingham 595-8976

Rollins, James L., Birmingham 787-2649

Rudder, William Harwell, Jackson 246-3896

Russakoff, Abraham H., Birmingham 591-2167

Russakoff, Alex David, Birmingham 591-2167

Sellers, David Frederick, Daphne 433-2076

Shamblin, William Reginald, Tuscaloosa 758-8376

Stephens, Albert B., Jr., Birmingham 252-6121

Sherrod, Henry L., Jr., Birmingham 591-2393

Silberman, Donald J., Birmingham 595-8976

Simmons, Albert Grayson, Monroeville 743-3288

Smith, James Clement, Birmingham 836-4661

Snapp, Jack Tipton, Huntsville 539-9311

Sutherland, Hugh Lewis, Jr., Huntsville 539-1739

Thomas, Henry Duke, Birmingham 933-2640

Thuss, William G., Jr., Birmingham 323-1661

Ward, James Keene, Birmingham 595-8976

Warrick, William D., Birmingham 591-2307

Weaver, Charles Daniel, Mobile 433-3907

Wheeler, Joe Ann L., University 348-6262

White, Morris Wayne, Huntsville 534-7301

White, William Walden, Centre 927-3374

Whitehead, John S., Birmingham 592-8277

Williams, James R., Birmingham 324-7547

Wilson, Joseph D., Birmingham 871-6226

Windsor, James L., Bessemer 425-1691

Yoe, Robert H., Jr., Birmingham 933-2640

NEW TELEPHONE NUMBERS

Donald, Charles Johnson Jr., Birmingham 595-3429

Funderburg, Lonnie W., Birmingham 591-2534

Graham, Stanley Edward, Birmingham 322-7417

Harsh, Griffith R., Birmingham 322-7417

Hazelrig, Cooper G., Birmingham 591-2843

Hofammann, Karl E. Jr., Birmingham 592-3783

Kessler, Charles R., Birmingham 787-2629

Landers, Bluitt L., Jr., Birmingham 591-2304

Lauderdale, Robert O., Jr., Birmingham 591-2304

McElroy, James B., Birmingham 591-2706

McRae, John Finley Jr., Birmingham 322-7412

Morgan, James M. Jr., Birmingham 595-4233

Oliver, Ernest B., Birmingham 786-3439

Preston, Roy T., Jr., Birmingham 591-2534

Randall, Fay M., Birmingham 591-2516

Reque, Paul G., Birmingham 591-2169

Romine, William O., Birmingham 591-2534

Roy, Barbara Jean, Birmingham 591-2534

Russell, Robert T., Birmingham 591-2307

Smith, Greene H., Jr., Birmingham 592-6866

Smith, Lamar M. C. Jr., Birmingham 592-8904

Sperling, David, Birmingham 591-2314

Stevenson, Edward W., Birmingham 595-1152

Sweeney, Donald B., Birmingham 322-7417

Thomas, Edward L., Birmingham 591-2516

Thomas, Henry Duke, Birmingham 591-2843

Warrick, George W., Birmingham 591-2692

Whitehurst, Walter R., Birmingham 322-7417

Whitman, Marcus Jr., Birmingham 591-2516

Stover, Samuel L., Birmingham 934-3330
Fitz-Gerald, Maurice J., Demopolis 289-1517
Perret, Norbert Jr., Demopolis 289-1517
Hinton, John L., Mobile 432-2687
Mortensen, Andreas V., Mobile 432-2687
Bennett, Willard D., Montgomery 288-0540
Hughes, William D., Montgomery 288-0540
May, William P., Montgomery 288-0540
Pyron, William W., Decatur 355-3645
Beck, Ronald V., Phenix City 298-0671
Everett, Gerald W., Woodland 499-6357
Holley, H. D., Jr., Gadsden 547-2574
Pittman, James Allen Jr., Birmingham 324-6581
Black, J. Kendall, Jr., Huntsville 539-1136
Williams, J. Hayes, Birmingham 592-3783
Wilson, Thomas A. S., Birmingham 595-3439
Woolley, Andrew P. Jr., Birmingham 591-2534
Yoe, Robert H., Birmingham 591-2843
Aldrete, Joaquin S., Birmingham 934-5148
Beckering, Raymond E. Jr., Birmingham 787-1413
Huber, Francis C. Jr., Birmingham 934-4696
Lyons, James A. Jr., Decatur 355-7240
Mesel, Emmanuel, Birmingham 934-5289
Scokel, Paul William III, Graysville 674-9422
Watson, Alfred Lawrence, Huntsville 539-9311
Chambless, William House, Montgomery 288-4690
Crocker, Francis Lauren, Cullman 734-1641
Horn, Louis Giles III, Huntsville 539-2728
Hornsby, Robert Jerald, Huntsville 539-2728
Gegan, Edward Lester, Livingston 652-7979
Weber, Alvin Julian III, Muscle Shoals 383-5524
Welch, Elbert Sylvester, Hanceville 352-6036
Seay, John David, Fayette 932-5211

–The lowest priced tetracycline–nystatin combination available–

DOCTORS
Who Play With Fire
(Their Favorite Recipes)

A successful meal may depend upon the first and last courses as often as it does on the entree or paix dé resistance.

A somewhat different hors d'oeuvre is prepared as follows:

Ingredients: Party style rye bread slices about 3/8 inch thick cut into rounds; egg plant 1/4 inch thick, cut into rounds slightly smaller than bread; firm cheese such as Swiss, Mozzarella, or Gruyere, thin slices cut into rounds the same diameter as egg plant; anchovy butter.

Soak egg plant slices in ice salt water for about one hour. Toast rye bread rounds very lightly on one side under broiler. Spread untoasted side with anchovy butter. Blot egg plant on tea cloth or absorbent kitchen towel. Place raw egg plant rounds on buttered toast, top with cheese round, sprinkle with paprika. Place under broiler until cheese begins to melt and brown. Remove and serve immediately.

Caramel Custard

Ingredients: 2 cups milk, 1½ cups sugar, 1 teaspoon vanilla, 6 eggs.

Scald two cups milk and place off stove to cool. Separate six eggs, beat yolks with pinch of salt until creamy, add one cup granulated sugar, add warm, but not hot, scalded milk to sugar-egg mixture and stir until dissolved, add vanilla. Place ½ cup granulated sugar evenly distributed in heavy saucepan or skillet (preferably with tight fitting lid). Heat gradually until sugar caramelizes. Pour immediately about two teaspoons full of liquid caramel into the bottom of individual custard cups (six to eight, depending on size). Caution: This caramel is exceedingly hot, it also hardens rapidly upon cooling.

Strain the liquid mixture into cups through fine cloth to remove any lumps. Place cups in pan with hot water to 2/3 depth of cup in preheated oven at 375 degrees for 40 minutes or until a thin knife pushed into custard comes out clean.

Chill custards, loosen with thin knife blade and turn onto serving dish so that caramel spreads over custard.

—William L. Smith, M. D.
Montgomery

Deliveries on Schedule

Pregnant mothers will become "day laborers" beginning in late 1972, under a schedule announced by Barnes Hospital, St. Louis. From then on they will have their babies during normal 9-to-5 working hours.

A new method of induced labor makes the move possible, according to Dr. Arpad I. Csapo, professor of obstetrics and gynecology at Washington University.

While an emergency crew will be available, three years of experiments have convinced specialists that the number of cases needing off-hour help is minimal.

An Underground Frankenstein

Waste disposal wells, once considered safe, are now helping to pollute the earth. In Ludington, Mich., a leak in a Dow Chemical Company disposal well polluted an underground water supply. In Erie, Pa., a well containing paper-making chemicals "blew its top," spewing thousand of gallons of the foul-smelling liquid into nearby Lake Erie. In Denver the pressure caused by the Army's pumping of poison gas wastes underground is blamed for a spate of earthquakes that still go on though pumping has ceased. And in Port Huron, Mich., chemical waste dumped into wells on the Canadian side has caused a dozen old, abandoned oil and gas wells under Port Huron to begin leaking.

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrachloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantain 0.14 Gm.)

Cantraindicatians: Known sensitivity to sulfonomides.
Precautians/Adverse Reactions: The usuol precoutions for topicol ond systemic sulfonomides should be observed becouse of the possibility of obsorption. Burning, increosed locol discomfort, skin rosh, urticorio or other monifestotions of sulfonomide toxicity ore reosons to discontinue treotment.
Dasage: One opplicotorful or one suppository introvogi-nally once or twice doily.
Supplied: Creom – Four-ounce tube with or without opplicotor. Suppositories – Box of 12 with opplicotor.

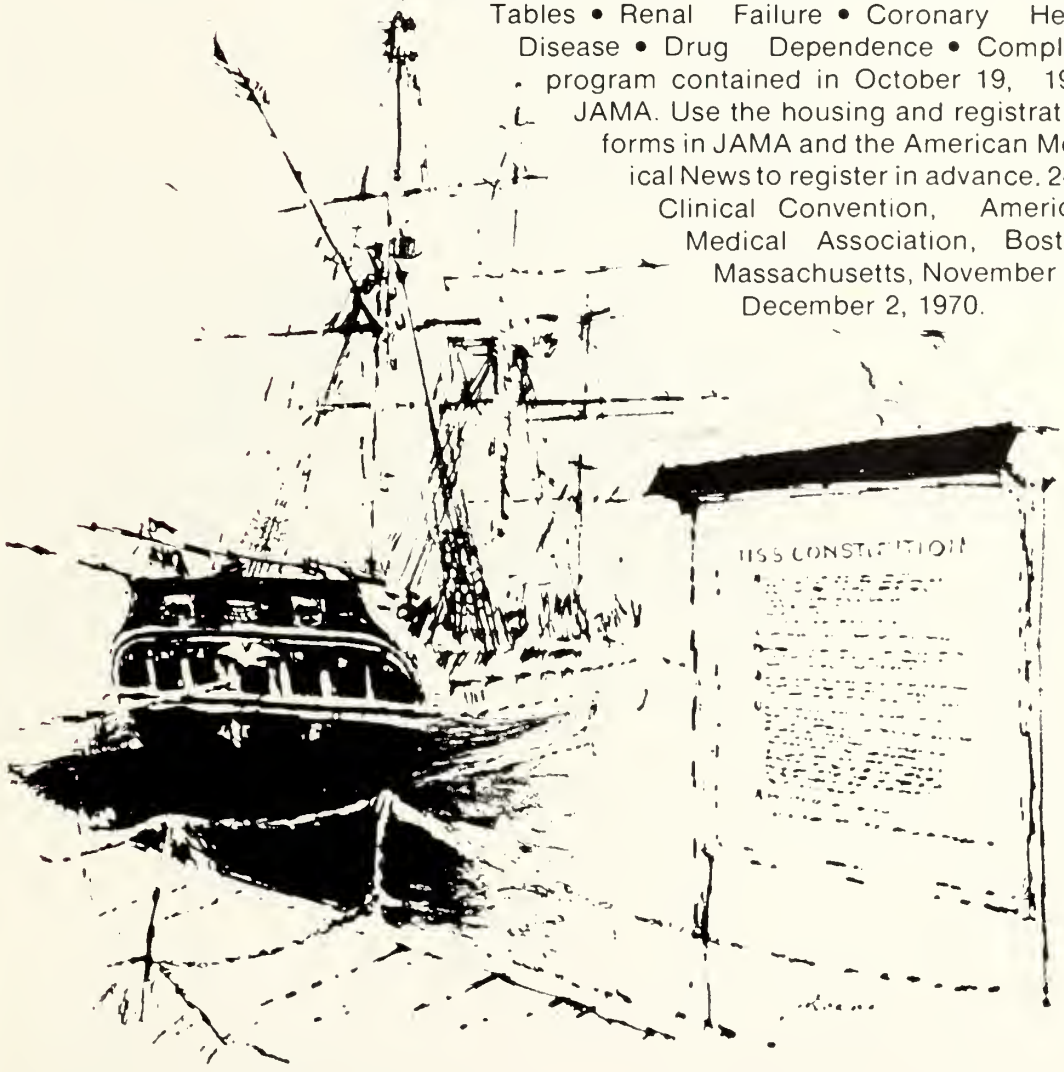
TRADEMARK: AVC AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

24th AMA Clinical Convention in Boston, Massachusetts November 29-December 2, 1970

WHAT'S NEW IN MEDICINE? Numerous scientific sessions at the AMA 24th Clinical Convention will provide the answers • Clinical Immunology • Clinical Gynecology • Pollution and the Physician • 3 Postgraduate Courses in Anesthesia, Burns, and Fluid and Electrolyte Balance • 9 Luncheon Round Tables • Renal Failure • Coronary Heart Disease • Drug Dependence • Complete program contained in October 19, 1970 JAMA. Use the housing and registration forms in JAMA and the American Medical News to register in advance. 24th Clinical Convention, American Medical Association, Boston, Massachusetts, November 29-December 2, 1970.



INDEX TO ADVERTISERS

Arch Laboratories 331

Becton Dickinson and Company 339, 340
Blue Cross/Blue Shield ..... 3rd Cover
The Bradley Center 344
Breon 353
Burroughs Wellcome and Co. 349

Campbell Soup Co. 325
Classified 303

Guest House Motel 302

Highland Hospital 362
Hynson, Westcott & Dunning, Inc. 293

Lederle Laboratories 295, 343, 357
Eli Lilly & Co. ..... 1st Cover, 316

Medicenters of America ..... 2nd Cover
Wm. S. Merrell 355

National Drug Company 307, 308, 359, 360

Wm. P. Poythress 350

A. H. Robins Co. 296, 297, 312, 313, 335, 336
Roche Laboratories ..... 298, 299, 300, 312, 313, 4th Cover

G. D. Searle & Co. 326, 327
Stuart Pharmaceuticals 304, 305, 328

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA
Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY
Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available
Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*
or

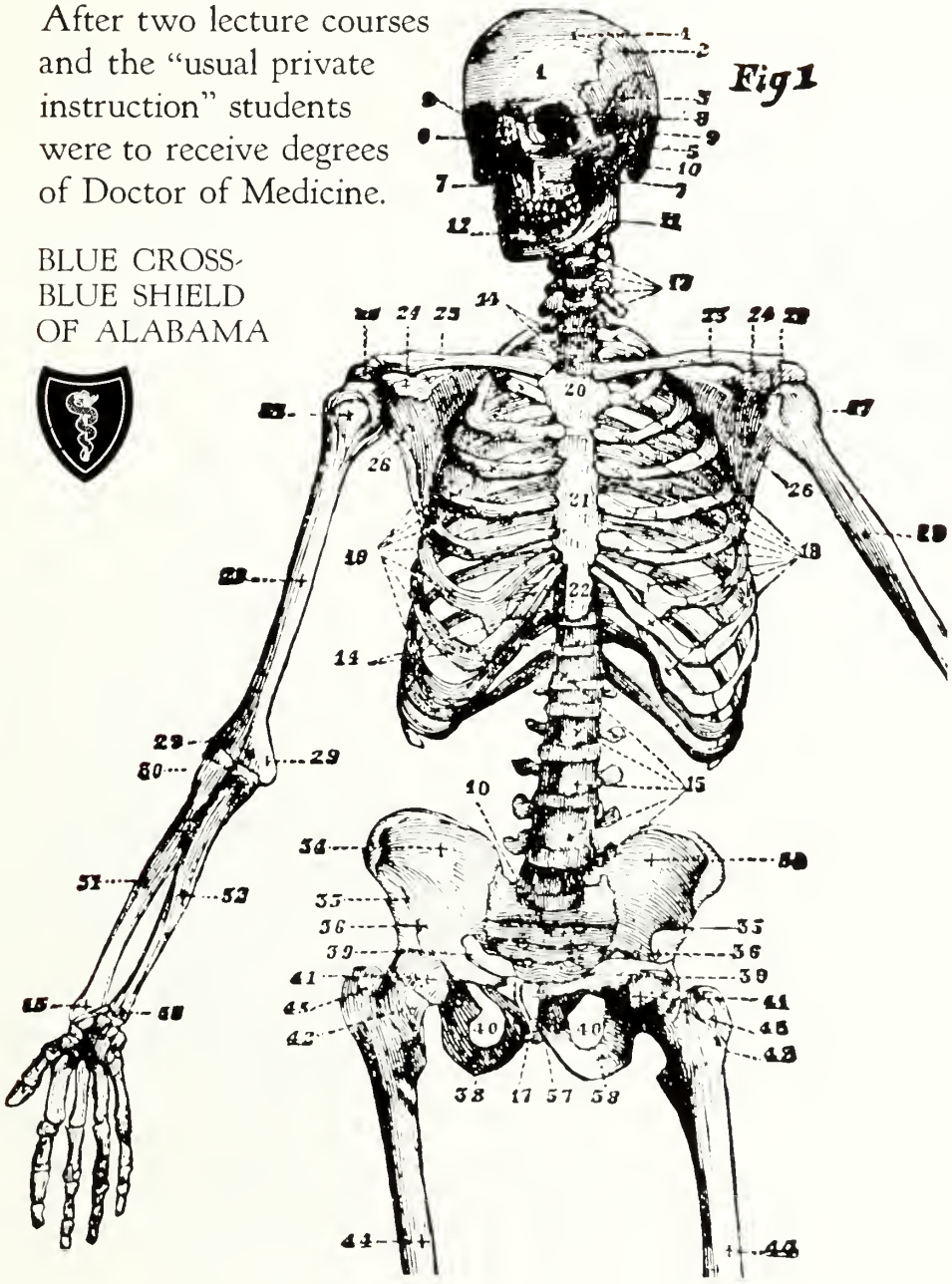
SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

In 1845 the Alabama Legislature authorized the establishment of a Medical College. After two lecture courses and the "usual private instruction" students were to receive degrees of Doctor of Medicine.

BLUE CROSS-
BLUE SHIELD
OF ALABAMA



anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

for the patient ruled by anxiety

Librium®

(chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

JOURNAL of the Medical Association of the State of ALABAMA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

DISPLAY
SHELVES

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA • 1873 •

IN THIS ISSUE

Laboratory Tests for Hepatitis 379

Blood Gas, Fluid and Osmotic Monitoring in the Coronary-Pulmonary Care Unit . . 381

Family Planning - A Health Priority 414

Francis A. Countway Lib. of
Medicine
10 Shattuck St.
Boston, Massachusetts 02115

DECEMBER 1970

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDICENTER
OF AMERICA

A Nice Place to Get Well

Medicenter of America / Mobile, Alabama 36607

THE FRANCIS A COUNTWAY
LIBRARY OF MEDICINE
BOSTON
22 DEC 1970

LACTINEX®

LACTINEX®

TABLETS & GRANULES

■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

Introduced to help reestablish the normal physiology of the intestinal tract in gastrointestinal disturbances[1], particularly diarrheas (including those resulting from antibiotic therapy), Lactinex is also useful for reestablishing the flora following bowel surgery, infant colic, mucous colitis, foul-smelling stools, pruritus ani, flatulence and hives.[2,3,4,5,6]

Lactinex contains a viable mixed culture of both *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HWD (#LX06)

Baltimore, Maryland 21201

LX

References:
(1) Siver, R. H.: CMD, 21:109, September 1954. (2) Frykman, H. H.: Minn. Med., 38:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., 51:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., 15:15-16, October 1965. (5) Weekes, D. J.: NY State Jour. Med., 58:2672-2673, August 1958. (6) Ellis, S. and Spratt, J. S.: JOUR. AMER. GER. SOC., 18:410-415, May 1970.

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • December, 1970 • No. 6

Office of Publication
19 So. Jackson St. — Montgomery, Ala. 36104
Subscription Price — $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. — Montgomery

Managing Editor
L. P. Patterson — Montgomery

Assistant Managing Editor
Mary Nell Williford — Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman — Montgomery
C. Kermit Pitt, M. D. — Decatur
H. H. Hutchinson, M. D. — Montgomery
William L. Smith, M. D. — Montgomery
L. P. Patterson — Montgomery

Officers of the Association

President
S. Buford Word, M. D. — Birmingham

Acting President
O. Emfinger, M. D. — Union Springs

President-Elect
A. E. Thomas, M. D. — Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. — Brewton
J. E. Cameron, M. D. — Alexander City
Wood S. Herren, M. D. — Birmingham

Secretary-Treasurer
William L. Smith, M. D. — Montgomery

Executive Director
L. P. Patterson — Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. — Decatur
J. P. Collier, M. D. — Tuscaloosa
Paul W. Burleson, M. D. — Birmingham
L. L. Hill, M. D. — Montgomery
M. Vaun Adams, M. D. — Mobile
J. D. Bush, M. D. — Gadsden
E. L. Strandell, M. D. — Brewton
John W. Davis, Jr., M. D. — Montgomery
J. Garber Galbraith, M. D. — Birmingham
H. G. Hodo, M. D. — Fayette

State Health Officer
Ira L. Myers, M. D. — Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1970
Delegate—E. Bryce Robinson, Jr., M. D., — Fairfield
Alternate—W. E. White — Anniston

1971
Delegate—M. Vaun Adams, M. D. — Mobile
Alternate—E. L. McCafferty, Jr., M. D. — Mobile
Delegate—P. W. Burleson, M. D. — Birmingham
Alternate—Robert Parker, M. D. — Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. — Fairfield
Alternate—W. E. White — Anniston

CONTENTS

President's Page — 366

The Woman's Auxiliary — 368

Editorial Comment — 372

Peace on Earth, Good Will — 372

A Range of Language—From the Obscure to the Crystal Clear — 373

Legal Page — 374

Statute of Limitations Against Physicians and Surgeons for Malpractice — 374

Scientific Section — 379

Laboratory Tests for Hepatitis, Thomas S. Hosty and Robert D. Francis, Montgomery — 379

Blood Gas, Fluid and Osmotic Monitoring in the Coronary-Pulmonary Care Unit, D. S. Tysinger, Jr., M. D., Dothan — 381

Lectureship at UAB Honors Dr. Samuel Buford Word — 386

Fathers and Sons in Medicine — 391

Atlanta and Memphis Get Greensboro Doctor's Sons — 391

Around the State — 395

Vital Statistics — 395

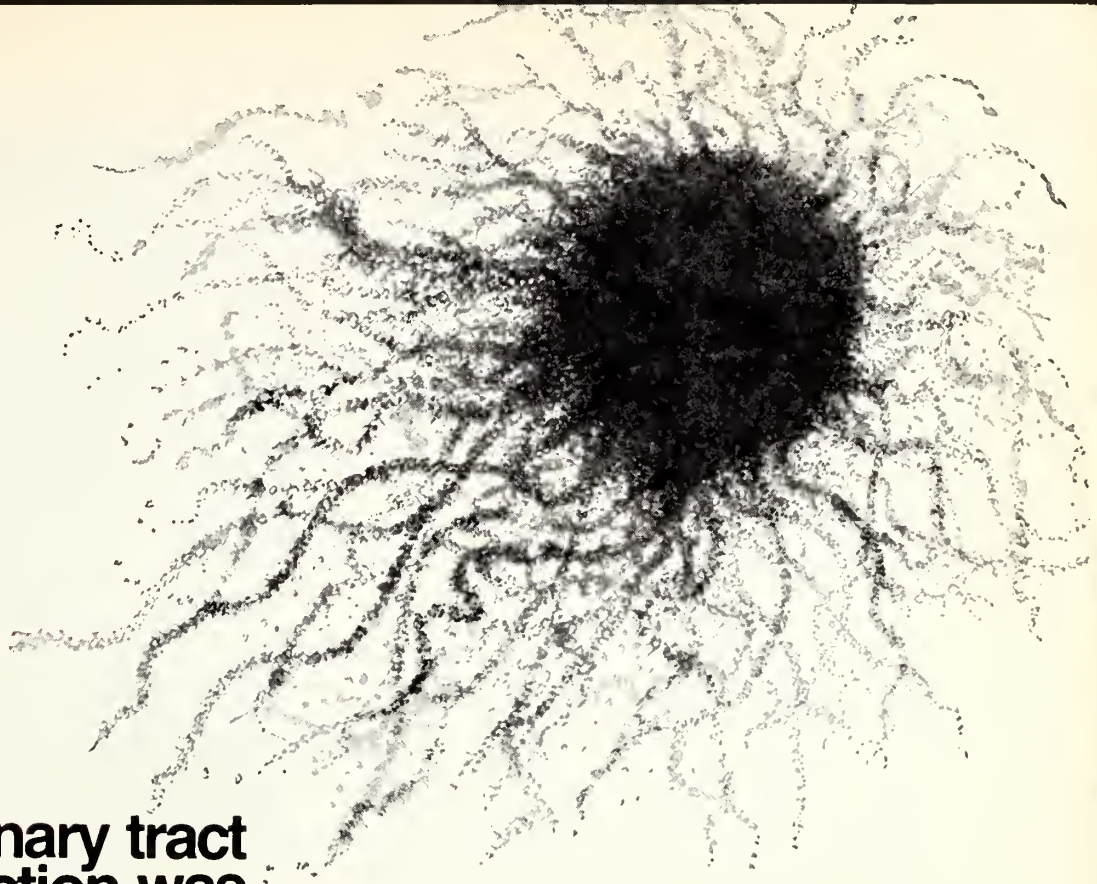
Association Forum — 398

Economical Long-Distance Telephoned Electrocardiographs — 398

Physician Placement Service in Alabama — 406

The Month in Washington — 408

Family Planning—A Health Priority — 414



A urinary tract infection was eliminated last week

testinal monilial overgrowth has appeared this week

For women who are diabetic or debilitated, oral antibiotic therapy often sets the stage for monilial overgrowth in the intestine.

When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

It doesn't let monilia begin where bacteria end. Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 450-9

President's Page

O. Emfinger, M. D.

It is with mixed feelings that I write the President's Page for the Journal for the first time. I feel honored to have the privilege but much sadness by the fact that Dr. Buford Word's disability has cast me in this role.

On this page there has been one repeated theme by those who have written it over the past few years. Mainly, that we as members of the Medical Association of the State of Alabama must involve ourselves in our county, state and national medical organizations. It does not take a great amount of wisdom to see that only in the combined strength of the many physicians in our state and nation can there be enough influence exerted to impress those who would mold a new type of medical delivery service, but we must and will have the commanding voice in determining the character of health care delivery.

It would be naive to think that the bureaucracy that has already thrust itself into our midst can be cast aside. Whether the present program of government medicine is good or bad is highly debatable. Whether the future can be planned to enable us to deliver better health care in a manner acceptable to us as physicians will depend on our participation in planning those programs. It is a certainty that we will have no voice in the matter unless we use our influence in its maximum capacity, and that maximum capacity can be attained only through unity of effort. The Medical Association of the State of Alabama should be the most powerful organ in the state in any planning which affects the practice of medicine. Unfortunately we have not always marshalled our forces to speak out. There are those in the political arena of Alabama today who would take from our Board of Health functions of a medical nature and place them in the hands of political bureaucrats. We must work closely with our political friends to improve the quality and the delivery of health care; but we must guard zealously those functions which be believe to be our health responsibility.

As the new legislature begins to organize and to prepare for its session in 1971, let us look diligently to the Medical Association to continue to make our views known as they relate to providing health care for our people. Let us not be caught off guard as we have in times in the past and allow legislative actions of the health nature unless it is for the best interest of the people of Alabama.

And I firmly believe that no one is as knowledgeable as to what is best for the health care in Alabama as the medical profession of this state. We must have a united Association and a strong association to be effective.

Many of you will be called upon to use your influence at a local level and your friends representing your district in the legislature. It will take the organized strength of the Association to be effective but that strength comes from the individual effort of each physician in his own locale. Just re-

member that when legislation affecting health care is to be considered in the capitol, you are the most knowledgable person your legislator can turn to for advice as to how to vote.

O. Emfinger, M.D.

O. Emfinger, M. D.

Acting President
The Medical Association
of the State of Alabama

A Liberal Education

That man, I think, has had a liberal education, who has been so trained in youth that the body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself.

Such a one and no other, I conceive, has had a liberal education; for he is, as completely as a man can be, in harmony with Nature. He will make the best of her, and she of him. They will get on together rarely; she as his ever beneficent mother; he as her mouthpiece, her conscious self, her minister and interpreter.

—Thomas Henry Huxley

Money amassed either commands or obeys each of us.

—Horace

Ambulance Crisis General

One of the most compelling arguments for preventive medicine is a report issued by the Chicago Hospital Council. Its message is briefly that in metropolitan hospitals you can find adequate treatment if (1) you can get an ambulance and (2) you can survive the ambulance ride.

The report is based on a two-year study by the University of Chicago Center for Health Administration Studies. Among its conclusions:

Ambulance service is bad in the city, worse in the suburbs. Police squadrons, inadequately equipped and staffed for emergency cases, handle most of them (or at least most of those lucky enough to find ambulance service at all). Suburban hearses double for ambulances, with attendants more skilled in embalming the dead than in keeping the desperately ill alive. . .

—Chicago Today

$40,000 guaranteed first year. General practices in small scenic Alabama city. Maximum leisure time with family. Not an employment agency. No cost to physician. Sanford Smith, Director-Physician and Personnel Planning, P. O. Box 9836, Houston, Texas 77015. 713-453-6324.

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

With the coming of the Christmas Season, and its hope for "Peace on earth, good will to men," and its joy of giving, I have chosen to use this page to pay a richly deserved tribute to you doctors.

"He would have been known to the world as a Patriot, had he not been known as something greater—a Physician."

You had many a choice in choosing a career, but you chose one of service to others. The practice of medicine is a demanding profession. Your hours are long, responsibilities tremendous, and disappointments many, but your rewards of accomplishment far overshadow these. Medicine presents a challenge, and you meet it with your never ending fight against disease and death.

The majority of physicians' patients and their families consider him a close friend, and hold him in high esteem. You justly merit this regard for when you are harassed by unreasonable pressures, you never lose your dignity nor composure, and always have an attentive ear, sympathy, and most of all KINDNESS.

You have heard all this before, but isn't it nice to hear it again?

Your Auxiliary is proud of your dedication and selfless devotion to the art of healing. Your Auxiliary loves you because you are the greatest men on earth—our husbands!

MERRY CHRISTMAS!

Camille Johnson

Camille Johnson

Mrs. Howard C. Johnson

"A man could retire very nicely, if he could dispose of his experience at the price he paid for it."

—A. M. Jones

No one becomes wise who is sure he already is.

—Herbert Prochnow

Man is the only animal that can be a fool.

—Holbrook Jackson

The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.

Because diarrhea with cramping, nausea, and painful straining can strike at the most inopportune time, it takes a comprehensive agent to treat the total diarrheal syndrome and help get the patient back on the job. That's why so many physicians rely on Donnagel, especially during the fall and winter months when "flu" and viral gastroenteritis usually hit their peak.

Donnagel is much more than just a simple kaolin-pectin combination. It also contains the belladonna alkaloids to calm GI hypermotility and help relieve the distressing discomforts which so often accompany diarrhea. Certainly it's less expensive and more convenient than taking two medications. And the dosage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies everywhere on your prescription or recommendation.

When diarrhea and its discomforts separate a man from his job . . .

Donnagel®

Each fluid ounce contains: Kaolin, 6 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A·H·ROBINS

A. H. Robins Company,
1407 Cummings Drive,
Richmond, Va. 23220

Coughs are back...

clear the tract with the

Robitussin® Line

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

Robitussin®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Alcohol, 3.5%	

For unproductive allergic coughs

Robitussin A-C®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.
(warning: may be habit forming)	
Alcohol, 3.5%	

Non-narcotic for 6-8 hr. cough control

Robitussin-DM®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Dextromethorphan hydrobromide	15.0 mg.
Alcohol, 1.4%	

Clears sinuses and nasal stuffiness as it relieves cough

Robitussin-PE®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Phenylephrine hydrochloride	10.0 mg.
Alcohol, 1.4%	

Robitussin-DM in solid form for "coughs on the go"

Cough Calmers™

Each Cough Calmer contains:

Glyceryl guaiacolate	50.0 mg.
Dextromethorphan hydrobromide	7.5 mg.

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

Robitussin® extra benefit chart

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.

	Cough Suppressant	Antihistamine	Long-Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
ROBITUSSIN®					●
ROBITUSSIN A-C®	●	●			
ROBITUSSIN-DM®	●		●		●
ROBITUSSIN-PE®				●	●
COUGH CALMERS™	AHR		AHR		AHR

A. H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Editorial COMMENT

Peace on Earth, Good Will . . .

"Christmas comes but once a year," sang Tom Tusser four centuries ago.

He was wrong . . . if he meant Dec. 25th for all time and all places.

Early Christians had a variety of other dates to choose from, including January 6th, March 28th, April 19th, April 20th, and November 17th.

Nor could they agree on the year. One authority said Wednesday, Dec. 25, "in the 42nd year of Augustus;" another "in the 28th year of Augustus;" a third on "Friday, Dec. 25, the 15th day of the new moon;" and it was Clement who set the date of the "17th of November, 3 B. C."

Early Christians thought that any celebration of Christ's birthday was pagan and sinful, and early Englishmen were celebrating Dec. 25th as a holiday long before Christianity came to that tight little isle. During the rule of Oliver Cromwell the celebration of Christmas was banned in all England and punishment provided for violators of the law.

Whatever the date . . . whatever the year . . . and whatever your religion . . . the entire staff of the Journal of the Medical Association of the State of Alabama together with the staff in MASA's Central Office wishes the families of all Alabama doctors:—

A merry Christmas, a happy holiday, peace on earth, good will to men!

A Range Of Language—From The Obscure To The Crystal Clear

"We don't speak the same language."

As French and British eye one another across the English Channel, or French and Germans across the Rhine, there is validity in the plaint.

So there is too, when two telephone operators—one in New York's Bronx, the other in an Alabama Black Belt town—try to establish a long-distance connection.

"We don't speak the same language."

Generally, seated around the conference table, it may be said for Americans and North Koreans, for Americans and North Vietnamese.

Or, frequently, for husband and wife, without rapport, separated *also* by the breakfast table.

. . . And too often, in our day, it may be said of the doctor and his patient, the doctor and the bureaucrat, the doctor and the public!

"We don't speak the same language."

In the instance of the frustrated two in the dining room, an unimaginative interpreter isn't *always* the answer, isn't *often* the answer.

There is the true story of three men—a linguist and two who understood not one word the other spoke, separated by bitterly conflicting ideologies. After 15 minutes of conversation, the two parted warmly, admiringly as friends . . . because, what they said to one another had been deliberately misinterpreted by the linguist. He put in the mouth of each precisely what he knew the other wanted to hear.

In that instance, the answer to the lament, "We don't speak the same language," is: "Thank God!" Here the breakdown in communication was something to be desired, while at the married couple's breakfast table it was something to be regretted.

Somewhere between the two is the language of medicine, sometimes desirable, sometimes regrettable.

What medicine needs most at this time:—

An inspired interpreter, capable of choosing promptly between obscurantism and the moment of truth, knowing when to speak in parables, when in simple words of one syllable.

Therapeutics Session To Be Held At Tulane University Medical School

Dr. Arthur C. DeGraff, Professor of Medicine and Cardiology, New York University, and Dr. William J. Grace, Chief of Medicine at St. Vincent's Hospital, New York City, and Professor of Clinical Medicine, New York University, will participate in a one-and-a-half-day Therapeutics Session at Tulane University School of Medicine on Friday, January 8 and Saturday morning, January 9, 1971. Co-directors of this brief refresher symposium will be Dr. George E. Burch, Chairman, Department of Medicine and Professor of Medicine, together with Dr. F. Gilbert McMahon, Head of Therapeutics and Professor of Medicine at Tulane. Several other members of the Department of Medicine at Tulane will also participate in this meeting.

The meeting is aimed at clinicians and is intended to be a refresher course. The management of some common cardiovascular problems, the proper use of digitalis, management of acute myocardial infarction, hypertension, arrhythmias, and hyperlipidemia will be among the problems discussed. Tuition is free.

Statute Of Limitations Against Physicians And Surgeons For Malpractice

By J. Douglas Evans, J. D., Director,

Legal-Legislative Affairs

Much discussion has taken place regarding the statute of limitations in Alabama for malpractice actions against physicians and surgeons. Most of this discussion revolves around the length of time a prospective plaintiff has to engage in such a suit. Most doctors agree that the length of time allowed to bring suit against them is too long, but few realize that this statute is subject to many exceptions that could readily affect the time limitation for bringing a suit. The discussion here will deal with these exceptions.

Title 7, Section 25, of the Code of Alabama, 1940, recompiled 1958, sets out the statute of limitations for actions against physicians and surgeons and dentists for malpractice.

> "(1) All actions against physicians and surgeons, and dentists for malpractice, error, mistake, or failure to cure, whether based on contract or tort, must be commenced within two years next after the act or omission or failure giving rise to the cause of action and not afterwards; provided that if the cause of action is not discovered and could not reasonably have been discovered within such period, then the action may be commenced within six months from the date of such discovery or the date of discovery of facts which would reasonably lead to such discovery, whichever is earlier, provided further that in no event may the action be commenced more than six years after such act."

But Subsection 2 of Section 25 states:

> "Subsection (1) of this section shall be subject to all existing provisions of law relating to the computation of statutory periods of limitation for the commencement of actions; namely Title 7, sections 18, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 40, 42, 43, 44, 47, 48 of the Code of 1940. (1953, p. 1027, appvd. Sept. 17, 1953.)"

Therefore, the sections to which limitation of actions against physicians and surgeons applies, is subject to 17 other sections dealing with periods of limitation that are set out in the Code of Alabama. A look at these sections puts a new and rather complex light on the issue of whether or not a cause of action against a physician or surgeon is barred due to the running of the statute:

Section 18: This is merely a general statute of limitation saying that all civil actions must be commenced after the cause of action accrues, and within the period described in this chapter, unless otherwise specifically provided for in this Code.

Section 28: This section states that any agreement or stipulation to shorten the statute of limitations is void. This is true whether the stipulation is oral or is in writing.

Section 29: This section provides that a personal representative (usually an executor or administrator of an estate) is exempt from suit for six months, and this period is not considered as time running on the statute of limitations.

Section 30: This section provides that where a claim against an estate of a decedent has been duly presented, the limitation for the commencement of suit is suspended until the personal representative or heir of the decedent disputes the validity of the claim in writing.

Section 31: States that sections under this specific Article of the Code apply at both law and in equity court.

Section 32: States that the Article under which these sections are included does not affect Title 61, Section 17, of the Code of Alabama as it relates to claims against the heir, legatee, or devisee. A look at Title 61, Section 117, shows that it deals with persons, who, without authority, intermeddles with the estate of the decedent.

Section 33: States "the right of entry is not told by a descent cast." Descent cast means the devolving of realty upon the heir on the death of his ancestor without a will.

Section 34 provides that when a person is absent from the state during the period in which a suit might have been brought, that that time is not computed as a portion of the time necessary for the statute of limitations to run.

Section 35 provides that if an action is brought within the time limit, and judgment is rendered for the plaintiff, such judgment is reversed on appeal, the plaintiff has one year from the reversal to commence suit.

Section 36 gives persons under 21, insane persons, and those persons imprisoned on a criminal charge, three years after the termination of the disability to bring suit. All three of these classifications are considered by law to be disabilities as far as the right of the individual to bring suit. However, none of the above disabilities shall extend the period of limitations more than 20 years.

Section 37: This section sets out the rule when another state statute bars suit.

Section 40: This section provides that no act, promise, or acknowledgment is sufficient to remove the bar set by the statute of limitations.

Section 42: Says that where the plaintiff is seeking relief on the ground of fraud, and the statute of limitations has created a bar, the cause of action must not be considered as having accrued until discovery by the aggrieved party of the fact constituting fraud. After such discovery, that person has one year within which to bring suit.

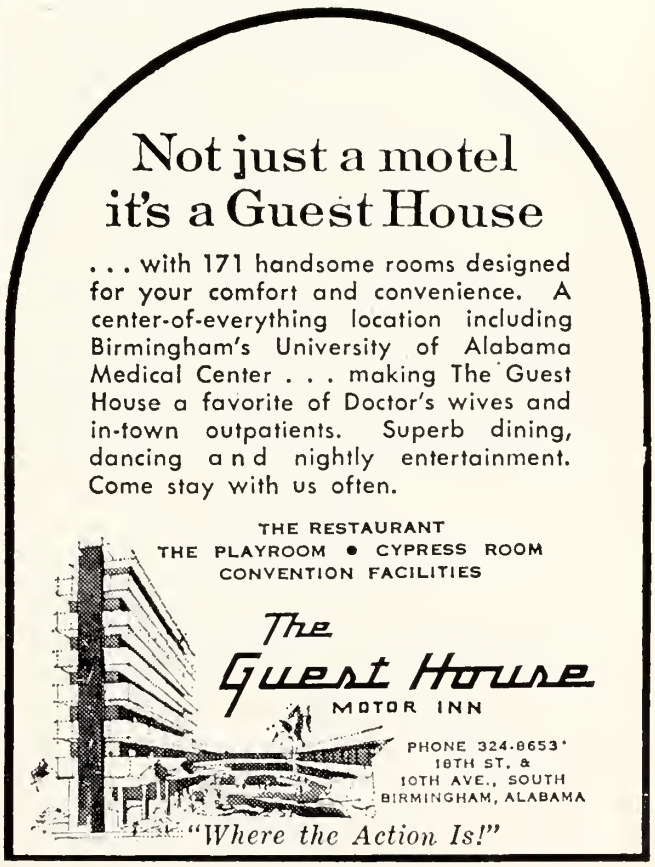
Section 43: This section states that the filing of the complaint or any other statement of plaintiff's cause of action in the office of the Clerk of the Circuit Court, or office of courts of like jurisdiction, shall constitute the commencement of suit.

Section 44 deals with the right of a principle to sue his agent for the latter's act or omission.

Section 47 provides that when two or more disabilities co-exist (example: an imprisoned minor) at the time the cause of action accrued, the limitation does not attach until all disabilities are removed.

Section 48 applies when a war suspends the statute. This statute deals mostly with contract actions, and is of little significance here.

Therefore, it is seen that the statute of limitations in a lawsuit involving malpractice can be very complicated and subject to much litigation.



PUBLISHED TO REPLACE A PREVIOUS ADVERTISEMENT WHICH THE FOOD AND DRUG ADMINISTRATION CONSIDERED MISLEADING

The Food and Drug Administration has requested that we bring to your attention a recent promotional campaign for Garamycin Injectable (gentamicin sulfate) which featured a nationwide *in-vitro* hospital survey involving a comparison of sensitivity patterns of Garamycin Injectable and seven other antibiotics.

The FDA considers the advertising misleading in several respects such as:

The *in-vitro* chart contained in the ads, which compared Garamycin Injectable with seven other antibiotics, implied that Garamycin Injectable is clinically more effective than the seven other compared antibiotics. THE FACTS ARE (1) THAT DIRECT EXTRAPOLATION OF NONCLINICAL FINDINGS TO CLINICAL EFFECTIVENESS IS UNWARRANTED, AND (2) THAT THE ADVERTISED *IN-VITRO* COMPARISONS DO NOT CONSTITUTE A VALID BASIS FOR SUGGESTING THAT GARAMYCIN INJECTABLE HAS GREATER CLINICAL EFFECTIVENESS THAN THE COMPARED ANTIBIOTICS.

The *in-vitro* chart and information contained under the ad heading, "Indications" presented *in-vitro* data results in such a way as to imply that the drug is indicated for Gram-positive bacteria, such as *Staphylococcus aureus*. GARAMYCIN INJECTABLE IS NOT APPROVED FOR INFECTIONS DUE TO ANY GRAM-POSITIVE ORGANISMS.

We emphasize that Garamycin Injectable is approved for use only in infections due to susceptible strains of gram-negative bacteria, including Pseudomonas aeruginosa, and species of indole-positive and indole-negative Proteus, Escherichia coli, and Klebsiella-Aerobacter.

Injectable Garamycin®

brand of gentamicin sulfate injection

Schering

Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin

BRIEF SUMMARY

INDICATIONS GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including Pseudomonas aeruginosa, and species of indole-positive and indole-negative Proteus, Escherichia coli, and Klebsiella-Aerobacter. Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly Pseudomonas aeruginosa, Proteus and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

CONTRAINDICATIONS GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

WARNINGS Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

PRECAUTIONS In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentration of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

ADVERSE REACTIONS The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

PACKAGING GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

SCHERING CORPORATION, UNION, NEW JERSEY 07083

SCH-2620

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
1 PINT (473 cc.) M-148
Lilly
ILOSONE® LIQUID
ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P.
125
SHAKE WELL BEFORE USING
REFRIGERATE AVOID FREEZING
1 PINT (473 cc.) M-153
ILOSONE® LIQUID
ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P.
250
SHAKE WELL BEFORE USING
REFRIGERATE AVOID FREEZING
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
ILOSONE® CHEWABLE ERYTHROMYCIN ESTOLATE TABLETS, N.F.
125 mg.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
100 PULVULES® No. 375
ILOSONE® ERYTHROMYCIN ESTOLATE CAPSULES, N.F.
250 mg.
100 PULVULES® No. 374
ILOSONE® ERYTHROMYCIN ESTOLATE CAPSULES, N.F.
125 mg.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

THE JOURNAL
of
THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
Published Under the Auspices of the Board of Censors

Volume 40 December, 1970 Number 6

Laboratory Tests For Hepatitis

Thomas S. Hosty* and Robert D. Francis**

In recent months, a number of inquiries have been received from physicians throughout the state regarding the availability of a test for hepatitis at the Bureau of Laboratories. Because of both the local interest shown in this new procedure and the appearance of an increasing number of articles in the literature on the subject, it was considered that the publication of this special note would serve to explain the position of the State Laboratory at this time.

The recently devised test for hepatitis is a relatively simple one to perform and use is made of the double-diffusion agar-gel technique. This technique was introduced by Ouchterlony and Elek[1] in 1948 and has been widely used for several years in investigations of the similarity and dissimilarity of antigens and antibodies: in principle, the antigen and antibody diffuse through an agar-gel and a precipitation line develops at midway point where optimum concentrations of antigen and antibody react. Limitations on the sensitivity of the procedure are imposed by molecular weight of the antigen, particle size of the antigen, and concentration and degree of dispersion of antibody molecules. When applied in hepatitis infection[2], the antigen (unknown component) is the serum of a patient who has developed clinical hepatitis following transfusion of whole blood or certain blood products. It has been shown that this antigen is present in the blood of persons with a variety of clinical conditions after receipt of one or more transfusions. The source of antibody (known component) for the test has usually been "selected" sera from hemophilias or refractory anemias who have been treated with multiple transfusions over a comparatively long period of time. Presumably such individuals unknowingly receive multiple doses of the serum hepatitis (Australia) antigen and experience either an apparent or inapparent infection.

A positive reaction in the test is definitive evidence that an individual has serum hepatitis or is carrying serum hepatitis (Australia) antigen in the blood. However, a negative reaction cannot be interpreted at this time as always indicating absence of infection for it may result from inability of the procedure to detect small but significant amounts of antigen. The sensitivity of the test has yet to be satisfactorily determined and no defined reference has been established for the standardization of antibody preparations used in the test. Laboratories where the procedure has been under investigation have used arbitrary standards and depended upon mutual exchange of research reagents.

With the exception of certain recent findings which require further confirmation[3],

*Director, Bureau of Laboratories, Alabama Department of Public Health.

**Consultant to Bureau of Laboratories, Department of Microbiology, University of Alabama School of Medicine.

evidence now available seems to indicate that the test is of value only in the detection of cases of serum hepatitis or of individuals in whom the antigen may persist in the blood for extended periods; the relationship of this antigen to the agent of infectious hepatitis requires further study.

It would appear that the test has more significant application in blood bank screening of donor blood than in the detection of sporadic clinical cases of hepatitis, since the latter usually can be accomplished by correlation of carefully obtained epidemiological history, clinical findings, and laboratory determination of serum glutamic oxalacetic transaminase (SGOT) levels. The appearance of detectable antigen in the serum of hepatitis patients seems to precede the elevation of SGOT levels by approximately eight-ten days[4].

It is our opinion that the test should be considered as still in the developmental stage and, therefore, not ready for unrestricted application on a routine basis. The Bureau of Laboratories will continue to review new developments with the test. When the limits of sensitivity have been defined and standardized reagents become commercially available which will enable the performance of a reproducible diagnostic test, the service will be made available to physicians of the state.

Bibliography

1. Crowle, A. J., Immunodiffusion, 1961, Academic Press, Inc., New York.

2. Blumberg, B. S., Sutnick, A. I., and London, W. T., Special Communication: Australia Antigen and Hepatitis. J. A. M. A., 207:1895, 1969.

3. Del Prete, S., Costantino, D., Doglia, M., Grazina, A., Ajdukiewicz, A., Dudley, F. J., Fox, R. A., and Sherlock, S., Lancet; 2:579, 1970.

4 Giles, J. P., McCollum, R. W., Berndtson, L. W., and Krugman, S., New Eng. Jour. Med., 281:119, 1969.

The Orphan

It is not surprising to find that Mohammed, himself an orphan, was deeply concerned with the protection of children who had lost their parents:

"And give the orphans when they come to age their substance; and render them not in exchange bad for good; and devour not their substance, by adding it to your own substance; for this is a great sin. And if ye fear that ye shall not act with equality toward orphans of the female sex, take in marriage of such other women as please you, two, or three, or four, and not more. But if ye fear that ye cannot act equitably towards so many, marry only one, or the slaves which ye shall have acquired. This will be easier, that ye swerve not from righteousness. And give women their dowry freely; but if they voluntarily remit unto you any part of it, enjoy it with satisfaction and advantage. And give not unto those who are weak of understanding the substance which GOD hath appointed you to preserve for them; but maintain them thereout, and clothe them, and speak kindly unto them."

—C. C. Mettler and F. A. Mettler

Blood Gas, Fluid And Osmotic Monitoring In The Coronary-Pulmonary Care Unit

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

PART II

Fluid Volume and Osmotic Balance

When an individual has the proper amount of fluid volume in the circulatory and interstitial tissues, he is said to be normovolemic. If for any reason he loses some of this fluid, so that there is less than normal fluid in the interstitial tissues and circulating blood volume, this is referred to as hypovolemic. If, on the other hand, fluid is added to the circulating volume and interstitial fluid so that the individual has more fluid than necessary then a state of hypervolemia exists. In some instances these changes occur as a result of multiple forms of fluid loss or addition.

In the coronary and pulmonary patients, who are not bleeding, there is not as complicated a situation as that which exists in the bleeding or surgical patient, etc. The coronary and pulmonary patients start out with a normal fluid volume as seen in Figure 1-A, represented by the square. This volume contains a fixed amount of total serum protein, hemoglobin and hematocrit. Now if, from day to day, we maintain this exact amount of fluid then, as we measure total serum protein, hemoglobin and hematocrit, they will remain the same. If the individual does not take in sufficient volume or loses more than usual, then the fluid volume will be decreased as in the Figure 1-B, and since the volume is reduced and we still have the same amount of total serum protein, hemoglobin, and hematocrit in this volume, then the total serum protein, hemoglobin, and hematocrit will appear to increase. The degree to which they are increased, gives us an idea of the reduction in the fluid volume that has occurred.

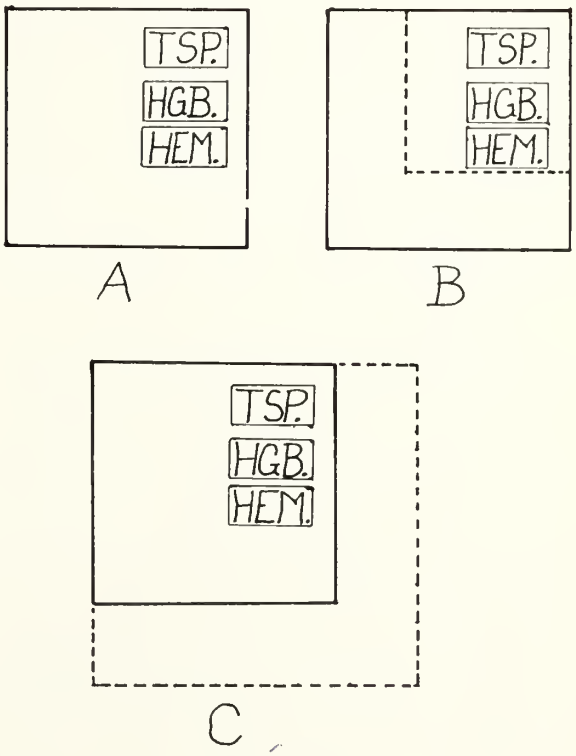


Figure 1

If on the other hand, vigorous fluid therapy has been given to counteract shock or to carry the many forms of medication, the fluid volume becomes increased more than usual. Then a situation such as depicted at Figure 1-C is noted. Here, again, the absolute amounts of total serum protein, hemoglobin, and hematocrit are the same, but now with an increase of fluid volume. The constituents are diluted so that the daily total serum protein, hemoglobin, and hematocrit are now lower, which means the patient is holding fluids. Most of these changes can to a certain extent be depicted by fluid intake and output charts. However, they are sometimes not accurate and the total protein, hemoglobin, and hematocrit are. The individual who is nauseated or who has diarrhea loses fluids,

and replacements might not be adequate. In the individual who has developed an ileus, either due to filling the stomach with oxygen or washing out of potassium by diuretics or anoxia then intake and output charts may show considerable intake with little output, and yet the total protein, hemoglobin, and hematocrit goes up, suggesting a reduction in fluid volume. The protein, hemoglobin, and hematocrit are correct; the patient is putting the fluid into the gastrointestinal tract, though it is not exiting the body through either end. It is still outside the circulation and there is, indeed, a reduced fluid volume. Intake and output are not a substitute for the accurate following of fluid volume in the coronary patient with total serum protein, hemoglobin, and hematocrit.

As the fluid stays normal, increases and decreases (normovolemia, hypervolemia, or hypovolemia) there may be varying concentrations of the elements within this fluid that determines osmotic pressure. This cannot be measured too accurately, but from experience a very good idea of the osmotic balance of the fluids can be obtained by measuring sodium, potassium, and chloride. If the sodium, potassium, and chloride are normal, no matter whether the fluid volume is normal, increased, or decreased, for the fluid present, osmotic pressure is probably normal and this is spoken of as normosmotic. If there is a reduction in sodium, potassium, and chloride, in relation to the volume of fluid, then the fluid is hypo-osmotic. It does not keep fluid within the vascular system as it should. If on the other hand, the sodium, potassium, and chloride increases then there is a state of hyperosmotic pressure.

First, we'll go over some causes of difficulty with hypovolemia and hypo-osmotic states wherein the sodium, potassium, and chloride are more reduced than is the fluid volume. These may occur in such situations as nausea, vomiting, and diarrhea with excessive electrolyte loss over and above the fluid loss. A second cause is the use of diuretics and other modalities of treatment of pulmonary edema, in an individual who is normovolemic to start out with. In such instances, there is a disproportional loss of electrolytes to the fluid volume loss. The correction of this type of state is obvious. Hypertonic s o l u t i o n s , judiciously given, should be used sufficient to restore a normal osmotic, normovolemic state. Where more fluid has been lost than electrolytes, a hypovolemic, hyperosmotic state exists, such as would be due to lack of fluid through breathing, perspiring, etc. In this instance, a hypotonic solution, such as five per cent dextrose in water is more efficient in restoring a normo-osmotic normovolemic state. No matter what causes the hypovolemic state in the individual in the coronary care unit, the fluid is removed from general circulation and this loss itself is shock-producing. As this occurs the individual who is already in difficulty is more likely to be pushed into shock or, if shock is already present, it makes it doubly difficult to treat, if the state is not recognized.

The central venous pressure which frequently helps to determine the state of fluid volume may not be quite accurate if there is pulmonary edema of left heart failure which elevates the central venous pressure. If the state of the circulation is not impaired, pulmonary congestion-wise, the central venous pressure may well be low, with a drop in hourly urine output suggesting that there is poor tissue perfusion and a drop in circulating volume.

In the case of the hypervolemic patient, (the patient with too much fluid) he may be hypo-osmotic. This state frequently occurs as a result of pulmonary congestion, which is almost universal in the heart attack patient, causing a production of anti-diuretic hormones. The latter causes holding of water and is aggravated by diuretic therapy. This is also seen when the individual is getting multiple infusions such as pressor agents, bronchodilators, breathing stimulants, antiarrhythmiacs, and, in some cases, arterial lines that are infused with five per cent dextrose in water. The patient ends up getting a lot of water in comparison to electrolytes. Frequently there is massive fluid in-

take at the time of cardiac arrest or other difficulty. The patient ends up with a hypervolemic state with hypo-osmotic content. In this situation diuretics are not indicated other than ethyl alcohol. In the Flowers Hospital unit the spiritus fermenti used is 100 proof vodka, 1½ ounces every four hours. This is used because alcohol is the only substance that blocks anti-diuretic hormone. When it is used there is found a more rapid diuresis of water and a more rapid return to the normovolemic, normal osmotic state. Fluid intake should be held to a minimum and the patient closely monitored. As dehydration occurs a hyposmotic state may develop at which point diuretics would be indicated.

The hypervolemic, hyperosmotic state is due to the over use of fluids. When this condition is clinically evident the patient is usually in moderate to severe difficulty. Where this condition develops, diuretics, as well as decreased fluid intake, is indicated. Here, again, anti-diuretic hormone is one of the offenders and ethyl alcohol (1½ ounces every four hours) is started. Aldactone (which is an aldosterone blocking agent) is used four times a day. Central venous pressure and urine output are monitored. The lungs are checked frequently for moisture and either Lasix 2 cc's IV or Edecrin one ampule (single dose), are given periodically. The electrolytes and total protein, etc., are obtained four hours after each IV to determine new fluid volume levels until the patient is again dehydrated to a normo-volemic, normo-osmotic state. In the rare instances, where CO2 is sufficiently high, then IV Diamox is also used to help keep ahead of the respiratory acidosis that has developed.

In conclusion, if pH, PO2, and PCO2 are monitored and maintained, if fluid volume and osmotic pressure are monitored and maintained, more of the difficulties can be prevented. If these are not monitored, then it is necessary to wait until the patient is in clinical difficulty and then, in this unstable, unphysiological state, try to correct the situation. All complications do not fit into this catalogue but most of them do.

PART III

Summary and Conclusion

The average coronary patient who is hospitalized for monitoring is placed on oxygen (six liters per minute) and within 24 hours he is running arterial oxygen saturation usually about 60 to 70 mm. Hg. Where these parameters cannot be routinely measured, it is recommended that there be carried out several modalities of treatment including routine inhalation therapy q.4.h., breathing stimulants if the patient's visible breathing is poor, very judicious monitoring of the central venous pressure and measurement of urinary output in an effort to prevent difficulty. Concerning respirators to be used in the coronary pulmonary unit, the respirator used in such units should be capable of fulfilling all the demands that will occur. These are set forth in "The Place of Respirators in the Coronary Care Unit," Journal of the Medical Association of the State of Alabama, October 1969, Volume 39, Number 4: p 355-360. IPPB equipment must be pressure cycled, patient-following. They must have the ability to deliver continuous positive pressure, intermittent positive pressure, and positive and negative pressure to handle the various situations that may develop. The respirator should be completely flow rate controllable. A side-arm nebulizer machine cannot be, and is not, flow rate controllable since an effective nebulizer must have a flow rate of 30 liters per minute before flow rate control is introduced. The machines that are flow sensitive at the end of inspiration have high flow rates, cycles prematurely, with insufficient delivery, and are ineffective. Most of the continuous nebulizing equipment is not equipped for expiratory positive pressure and are not set up for expiratory negative pressure. Volume cycle equipment is less than useful. Volume limiting and fixed rate ventilating are the only means by which a volume cycle machine can deliver. Pressure cannot be controlled, and pressure is here most important. A pressure too high may kill the patient; a pressure too low will be inefficient. If a volume limit is placed on

FIGURE 2

A

Physiology Sheet

Date, Time	Blood Pressure			Pulse	CVP	Urine Output	I.V. Intake	PO Intake	Misc.
	Systolic	Diastolic	Mean						

B

Fluid & Osmotic Balance Sheet

Date	Sodium	Potassium	Chloride	TSP	Hemoglobin	Hematocrit	BUN

C

pH & Blood Gas Sheet

Date	Sample	pH	PCO2	PO2	A or O	Reason & Comment

D

I.V. Fluid Sheet

Date	Arterial	Venous	Xylocaine	Catocholemines	Others	Total

the air the patient can breath where continuous positive pressure is needed, it causes frequent massive negative phases to be produced by the patient which augments pulmonary edema. Therefore, the patient must be paralyzed or sedated to the point that he does not breath. This is dangerous; it is more likely to maybe kill the patient than leaving the respirator off. The futility of using a volume-cycled machine with its inherent limitation of patient following, and flow rate control should be self-evident. An OEM mask expiratory retard device has been shown to work better than this type of equipment. The physiology of these various types of breathing equipment and techniques of ventilating have been covered in "CLINICAL RESPIRATOR PATIENT RELATIONS" Journal of the Medical Association of the State of Alabama, August 1967, Volume 37, Number 2: p 141-148.

It is hoped that the reader will realize the necessity of an adequate laboratory that works 24 hours a day, seven days a week. It

should also be obvious why an adequate coronary care unit cannot be maintained in an institution which does not also maintain an adequate inhalation therapy service. It is hoped that the reader understands why it is absolutely necessary to monitor pH, PO2, PCO2, sodium, potassium, chloride, BUN, total protein, hemoglobin, and hematocrit. If these are understood, monitored, and corrected, one-third to one-half the difficulties still occurring in the coronary pulmonary care unit could be prevented. These parameters can be recorded with a series of sheets that can be quickly scanned by the physician even in emergency situations. Examples are shown in Figure 2-A, B, C, and D. Figure 2-A is the pulmonary physiology sheet and this is kept hourly. Sheet 2-B, is an example of the fluid and osmotic balance sheet. These are kept on an eight hour or daily basis, depending on the patient's condition. The third sheet is a blood gas and pH sheet (Figure 2-C) which routinely is kept every eight hours. (It is kept frequently as necessary and recorded as such). Finally, is the I-V fluid sheet (Figure 2-D) which is deemed necessary, due to the various types of monitoring that are now done. These four monitoring sheets are easy to follow, easy to read, and have been found quite useful in the Flowers Hospital Unit.

Return To Aesculapius

By 500 B. C. Alcmaeon had insisted on the doctrine "health depends upon harmony, disease upon discord of the elements within the body." This, however inadequately achieved, was the aim of the Aesculapian cult. In our own day the development of scientific medicine did for a time divert attention from the patient as an individual. The rise of morbid anatomy, bacteriology, and bio-chemistry in turn tended to this. But medicine is a department of biology and unless we consider the patient as a whole, as a living organism reacting to changes in either the external or the internal environment, we shall miss an essential part of his case. Ordinary materialistic medicine is apt to forget the fact that the patient's emotional and mental outlook will inevitably influence, and be influenced by his disease; the psychotherapist is apt to forget that the patient has a body which may be suffering from some physical distress.

—Sir Walter Langdon-Brown

Fear not the threat of becoming legally liable, for if in the practice of your profession you are intellectually honest, you will in all probability be legally correct.

—Carl O. Rice, M. D.

A Four-Letter Word For It

E. M. Pooley gave his version of allergy to the readers of the El Paso, Texas Herald-Post:

You get sick nowadays and what you got? Either a virus or an allergy. A virus is what you got when the doctors don't know what you got. An allergy is what you got when the doctors know what you got but don't know where you got it. The other morning I was awakened by a full-fledged case of the hives.

"Must be something you et," says the doc. "You got an allergy." Then the young doc explains it all.

He says that when the pithecanthropus of the eudaemon is in juxtaposition with the translux it makes a hyperthyroid excresence that combines with the whatnot and brings about psoriasis of the membrane and an irritation of the callipygian exodont. In other words, you itch.

—*Minnesota Medicine*

Protect the birds. The dove brings peace and the stork brings tax exemptions.

—Birmingham News

Lectureship at UAB Honors Dr. Samuel Buford Word

DR. RICHART

DR. WORD

The stricken President of the Medical Association of the State of Alabama has been honored by the Medical Center of the University of Alabama, Birmingham, with the establishment of an annual Samuel Buford Word Lectureship in Obstetrics and Gynecology.

Serving the first of these Lectureships on Friday, October 30th, was Ralph Richart, M. D., of Columbia University, who addressed the 125 physicians attending a UAB conference on uterine cancer on the subject, "The Biology of Cervical Intra-epithelial Neoplasia." The conference was attended by physicians from as far away as Arkansas and Oklahoma.

Prior to establishment of the Lectureship Dr. Word, a clinical associate professor of obstetrics and gynecology, had been forced by ill health to relinquish his position as MASA President, and in announcing the honor being paid him by UAB, Dr. Charles E. Flowers, Jr., chairman of the school's Department of Obstetrics and Gynecology, issued an elaborating statement:

"Dr. Word accepted willingly and enthusiastically all assignments in this department. This included care to indigent patients, lectures to medical students, staff coverage in both obstetrics and gynecology, making rounds with residents, and assisting in the operating suite. His most important contribution over the years was his teaching of obstetrics and gynecology pathology to the students. This was done on a weekly basis over a period of 18 years."

A 1931 graduate of Birmingham-Southern College, Dr. Word received his M. D. degree in 1935 from the LSU School of Medicine. He served his internship at Charity Hospital, New Orleans, was appointed a member of the UAB faculty in 1946, was a member of the first Board of Trustees of MASA, served on a number of committees, and was elevated to the MASA Presidency at the annual meeting in Mobile in the spring.

As he was unable to attend the Lectureship in person, and Mrs. Word received for him the citation, which read as follows:

"To Samuel Buford Word, a scholar and a true Southern gentleman in the most complimentary of terms; an excellent and stimulating professor of the Department of Obstetrics and Gynecology at the University of Alabama in Birmingham School of Medicine for 24 years; a suberb clinician, an excellent surgeon and a thoughtful friend of students, residents and his fellow man; a devoted husband and father; a fervent supporter of his alma mater, Birmingham-Southern; an outstanding citizen of Birmingham; a man who communicates with and appreciates his God; an admired, loved and respected member of the medical profession. . .

"It is with appreciation and devotedness that the Samuel Buford Word Lectureship in Obstetrics and Gynecology is established."

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

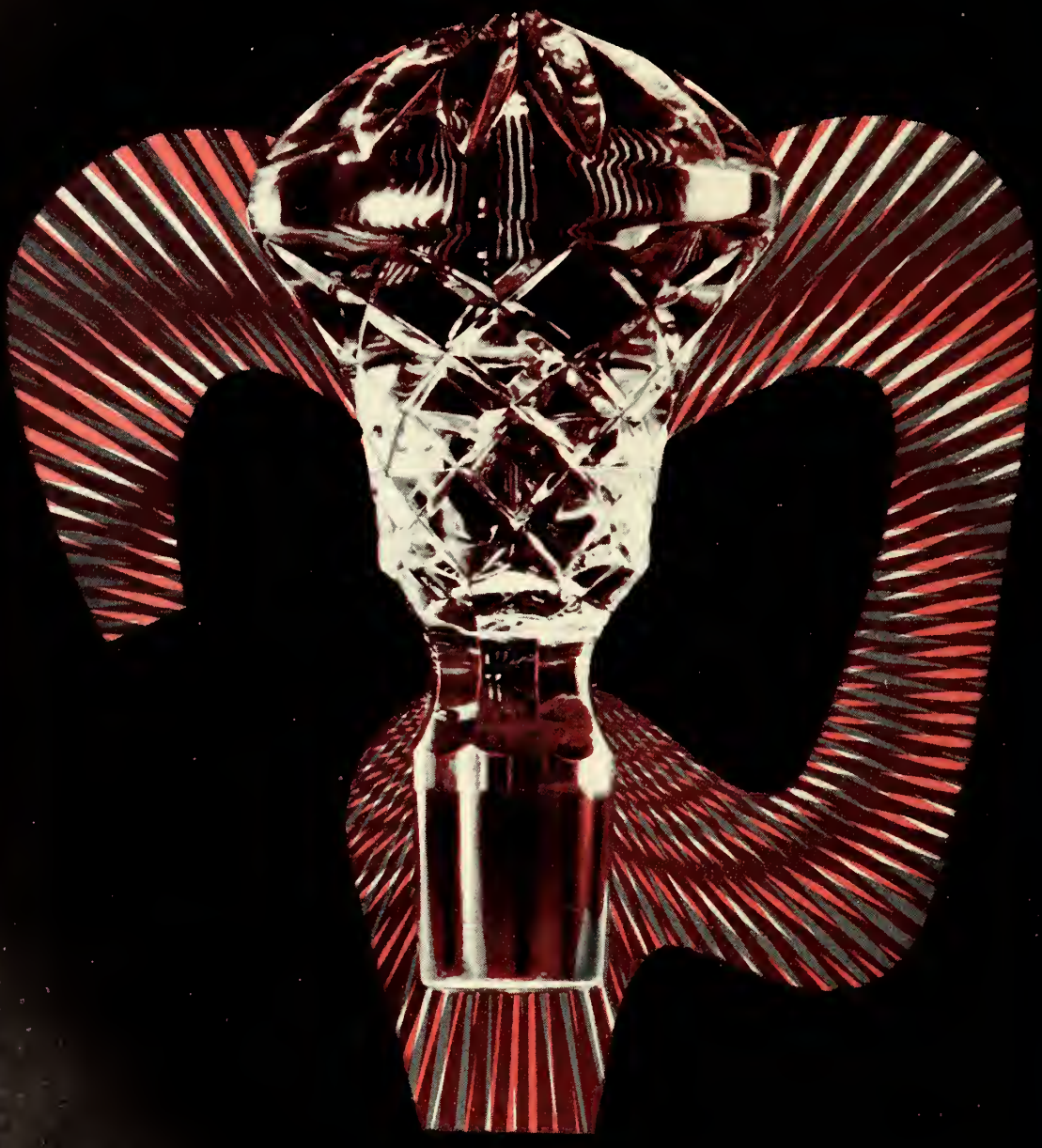
Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

THE STOPPER



LOMOTIL®

tablets/liquid

Each tablet and each 5 cc. of liquid contain:
diphenoxylate hydrochloride .....2.5 mg.
(Warning: May be habit forming)
atropine sulfate .....0.025 mg.

first aid in diarrhea of acute gastroenteritis

PROMPT ANTIDIARRHEAL ACTION
Roentgenographic studies demonstrate that the motility-lowering activity of Lomotil is concentrated in the first three hours and continues for at least six hours.

Clinical investigators have found ample confirmation of these determinations. Lomotil has reduced diarrheal urgency in many patients within one hour.

OPTIMAL ANTIDIARRHEAL CONTROL
Numerous investigators have remarked on the high degree of effectiveness of Lomotil in a variety of diarrheal disorders. Lomotil has given good to excellent relief of symptoms in many patients who had failed to respond to other measures.

UNSURPASSED ANTIDIARRHEAL ACCEPTANCE
Patients prefer Lomotil for its convenience, its prompt control of diarrhea and its relief of cramping and urgency. Physicians specify Lomotil for its dependable action and its relative freedom from side effects when taken as directed.

Warnings: Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: Lomotil is a federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise.

Overdosage: The medication should be kept out of reach of children since accidental overdosage may cause severe, even fatal, respiratory depression.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:
3-6 mo. .. ½ tsp.* t.i.d. (3 mg.)
6-12 mo. .. ½ tsp. q.i.d. (4 mg.)
1-2 yr. ... ½ tsp. 5 times daily (5 mg.)
2-5 yr. ... 1 tsp. t.i.d. (6 mg.)
5-8 yr. ... 1 tsp. q.i.d. (8 mg.)
8-12 yr. .. 1 tsp. 5 times daily (10 mg.)
Adults: ... 2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.
*Based on 4 cc. per teaspoonful.

Use of Lomotil is not recommended in infants less than 3 months of age.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

953

G. D. SEARLE & CO. • P.O. Box 5110, Chicago, Illinois 60680 • Research in the Service of Medicine

in cardiac edema

Dyazide®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

SK&F

Smith Kline & French Laboratories

Fathers and Sons in Medicine

Atlanta And Memphis Get Greensboro Doctor's Sons

Death last February deprived another Alabama doctor of the satisfaction of reading in this series about himself and the sons who followed him into medicine. It also reduced from ten to nine the group of Alabama doctors being welcomed next April into MASA's exclusive 50-Year Club.

He is Thomas Jefferson Anderson, M. D., born August 12, 1895, in Demopolis, educated in the public schools of Greensboro and graduated in 1917 from Greensboro's Southern University, later moved to the Magic City to become Birmingham-Southern. Four years later he received his M. D. degree from Tulane, after first serving a tour of duty in the Army in World War I. He interned at Touro before beginning four decades of general practice in Greensboro. He retired from active practice seven years ago.

Dr. Anderson was married first to Miss Frances Daniel of Columbus, Ga., and four children were born to them: Miss Evelyn Anderson, Greensboro; Roland B. Anderson, Charlotte, N. C., and the two other sons destined to follow their father into medicine. Incidentially there are ten grandchildren.

The eldest of their four children, born March 10, 1924, in Greensboro, was named for his father. He too received his earlier education in the public schools of Greensboro, went on to Birmingham-Southern for his baccalaureate, and earned his M. D. degree from Emory. Like his father, military service interrupted his education temporarily. He served in the Navy in World War II. Interning at Emory, he served a residency in internal medicine at Cleveland Clinic, in Ohio.

SENIOR, JUNIOR AND LEWIS

Unlike his father, whose life history is embraced in three adjoining west Alabama counties, Marengo (Demopolis), Greene (Eutaw), and Hale (Greensboro), Thomas Jefferson Anderson, Jr. chose the South's largest city (Atlanta) with offices on the South's most famous street (Peachtree) to practice. And a measure of his success may be gathered from the fact that he was early elected president of the Fulton County (Atlanta) Medical Society, the youngest ever to serve in that office. This Dr. Anderson is married to the former Betty June Kilpatrick of Atlanta and they have four children: Margaret, Tom, Frances, Bill. And if the "J" in the Anderson's name four generations back stands for the same middle name as that of the son, grandson, and great grandson, then son Tom is Thomas Jefferson Anderson IV.

The third Dr. Anderson is six years younger than his brother, born October 13, 1930, and named Lewis Daniel Anderson. Like his father and brother before him, he completed his public-chool education in Greensboro, but went to Emory for his baccalaureate before

(Continued on Page 394)

When irritable colon feels like this

The blowfish, a small species of fish, reacts to stress or fright by puffing itself up with air. After about a dozen noisy gulps the belly is balloon shaped and hard. When replaced in the water the air is quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

(Continued from Page 391)

entering the University of Pennsylvania from where he was graduated with his M. D. degree in 1953. He interned in that school's hospital, saw service in the Navy aboard the USS Orion, completed his residency in Orthopedic surgery at Campbell Clinic, Memphis, where he is today on the staff as well as an Associate Professor of Orthopedic surgery at the University of Tennessee College of Medicine.

The younger Dr. Anderson is married to the former Stella Cobbs of Anniston and they have four children: Evelyn, Dan, Tunstall and Lida. Three years ago Dr. Lewis Daniel Anderson was awarded the British Orthopedic Association's traveling fellowship.

Like their father before them, who was an Elder in his Presbyterian Church, the sons are active in their respective churches, Dr. Tom a Presbyterian Elder in Atlanta, Dr. Lewis an Episcopal Vestryman in Memphis.

And for all the information that went into this article, the Drs. Anderson are indebted to their father's widow, their stepmother, the former Hallie Cranford of Jacksonville, Fla., who was a widow at the time she agreed to change her name from Mrs. L. L. Daugherty, Jr., to Mrs. Thomas Jefferson Anderson, and her residence from Jacksonville to Greensboro.

Hypothalamus and Politics

Prince Otto von Bismarck, popularly known as the Iron Chancellor, once confided to the English painter Richmond that he was "all nerves." At the Battle of Koniggratz he was overcome by nervous fits of weeping. When severely annoyed he would vomit gall and take to his bed in a rage, both reactions mediated through the hypothalamus. Outwardly a symbol of concentrated power, to his wife Bismarck was just a "poor sick duck."

Emotional behavior verging on the maniacal was also the gaudier side of Napoleon's character. Under the influence of hypothalamic reactions, he could throw a prince out of the room, kick a venerable senator in the stomach, smash costly chinaware to break down an Austrian envoy's resistance, and rant and rave at Metternich for nine hours at a stretch. He once admitted that "my nerves are irritable," a superbly imperial understatement.

Closer to our own time, the most loathsome representative of hypothalamic politics was Adolph Hitler. He lived in a self-created atmosphere of what some have called "temperamental heat" or "raving excitement." His explosions of fury bordered on mania, though whether he actually chewed carpets is a debatable biographic point. When he was appointed Chancellor, he burst into tears; when he heard of the French capitulation in 1940 he danced a jig of joy. Alternately frenzied and morbidly despondent, the late dictator was a prime example of behavior under the rule of the thalamus.

—Felix Marti-Ibanez, M. D.

Isolation

The physician today must aspire to heal not the **sick** man, but the **man** sick, and must always offer him relief, counsel, and guidance for his return to the society from which his ailment has isolated him. Let us not forget that the most tragic feature of disease is that it **isolates** the patient. . . In so doing, in separating him from the society to which he belongs when healthy, disease, now as yesterday, injects into the life of the patient an element of fate and eternity, a religious or philosophical faith—or lack of faith.

—Felix Marti-Ibanez, M. D.

around the state

Vital Statistics

NEW MEMBERS

Jefferson County

Cannon, Harold Everett, b 37, mc Alabama 63, sb 64, 5532-1st Avenue South, Birmingham, Alabama 35212. Or.

Giles, Charles Henry, b 38, mc Loma Linda University 65, recip. NBME 68, 1615 North 25th Street, Birmingham, Alabama 35234. I.

Handal, Eduardo, b 26, mc University El Salvador 50; Limited License, Diagnostic Radiology Dept., 619 South 19th Street, Birmingham, Alabama 35233. Diagnostic Radiology.

Oberman, Albert, b 34, mc Washington University 59, recip. Missouri 68, 1919-7th Avenue South, Birmingham, Alabama 35233

Palmisano, Paul Anthony, b 29, mc University Cincinnati 56, recip. Ohio 67, 1919-7th Avenue South, Birmingham, Alabama 35233. Pd.

Shingleton, Hugh Maurice, b 31, mc Duke University 57, recip. North Carolina 69, 1919-7th Avenue South, Birmingham, Alabama 35233. G.

Stroud, Robert Malone, b 31, mc Harvard 56, recip. Georgia 66, 1919-7th Avenue South, Birmingham, Alabama 35233. I.

Thetford, Joseph Dimmick, b 12, mc Duke University 39, recip. NBME 41, Box 3250, Hueytown, Alabama 35020. GP.

Lauderdale County

Johnson, Lloyd, Jr., b 38, mc Alabama 65, sb 66, 220 West Tennessee Street, Florence, Alabama 35630. Or.

Marion County

Fuson, Edna Phillips, b 35, mc University Louisville 66, recip. Kentucky 70, Winfield, Alabama 35594

Morgan County

Rogers, Earl McNichol, b 37, mc University of Mississippi 64, recip. Mississippi 70, 13th Avenue at Medical Drive, S. E., Decatur, Alabama 35601. Pd.

MEMBERS DECEASED

Lawrence County

Dyar, James P., Moulton, Alabama, Deceased.

Montgomery County

Bird, Buford C., Montgomery, Alabama, Deceased 10/1/70.

Walker County

Green, Anderson C., Ashville, Alabama, Deceased 10/1/70.

CHANGES OF ADDRESS

Colbert County

McGrath, William Edward, present Sheffield, Alabama to P. O. Box 446, Sheffield, Alabama 35660

Wayland, James Lee, present Sheffield, Alabama to P. O. Box 548, Sheffield, Alabama 35660

Houston County

Moffett, Paul R., present Dothan, Alabama to 509 West Main Street, Dothan, Alabama 36301

Jefferson County

Caceres, Jorge Alberto, present Bessemer, Alabama to P. O. Box 2127, Bessemer, Alabama 35020

Collins, Harry G., present Birmingham, Alabama to 1413 Cosmos Circle, Birmingham, Alabama 35216

Dodson, William H., present Birmingham, Alabama to 800 Montclair Road, Birmingham, Alabama 35213

Fawal, Isa A., present Birmingham, Alabama to 8010 Second Avenue South, Birmingham, Alabama 35206

Fulton, William F., IV, present Birmingham, Alabama to 800 Montclair Road, Birmingham, Alabama 35213

Herlihy, Charles E., present Birmingham, Alabama to 3015-7th Avenue South, Birmingham, Alabama 35233

Hogan, Robert S., present Birmingham, Alabama to 803 Medical Arts Building, 1023 20th Street, 5 Points South, Birmingham, Alabama 35205

Lewis, Charles Franklin, present Birmingham, Alabama to 2624 Heathermore Road, Birmingham, Alabama 35223

Littlejohn, Wilmot Shipp, present Birmingham, Alabama to 2629 Aberdeen Road, Birmingham, Alabama 35223

Maloof, John A., Jr., present Birmingham, Alabama to 8010 Second Avenue South, Birmingham, Alabama 35206

Miller, Atwill Lamar, Jr., present Fairfield, Alabama to 801 Princeton Avenue, S. W., Birmingham, Alabama 35211

Wilson, Thomas A. S., present Birmingham, Alabama to 1318 South 19th Street, Birmingham, Alabama 35205

Lauderdale County

Roberts, Shaler S., Sr., present Florence, Alabama to Route 6, Box 418-B, Florence, Alabama 35630

Lowndes County

Griffin, Robert P., present Fort Deposit, Alabama to P. O. Box N, Fort Deposit, Alabama 36032

Madison County

Broyles, John A., III, present Fort Knox, Kentucky to Fox Forest Drive, Route 2, Lilburn, Georgia 30247

Frierson, Wallace B., present Redstone Arsenal, Alabama to Tennessee Valley Authority, P. O. Box 2000, Decatur, Alabama 35601

Mobile County

Berry, Sidney Ray, present Mobile, Alabama to Jackson, Mississippi

Clarke, Norborne R., Jr., present Mobile, Alabama to 214 Rochester Road, Mobile, Alabama 36608

Foster, Warren J., present Mobile, Alabama to Texas

Leigh, Milton M., present Mobile, Alabama to 120 Louiselle Street, Mobile, Alabama 36607

McKee, Wilbur E., present Satsuma, Alabama to P. O. Box 305, Grand Bay, Alabama 36541

Pringle, B. Clifford, Jr., present Birmingham, Alabama to 1720 Springhill Avenue, Mobile, Alabama 36604

Montgomery County

Burwell, Philip Kent, present Montgomery, Alabama to 1620 Carter Hill Road, Montgomery, Alabama 36106

Morgan County

McCain, Paul P., present Decatur, Alabama to P. O. Box 1383, Decatur, Alabama 35601

Pitt, Charles K., present Decatur, Alabama to P. O. Box 1823, Decatur, Alabama 35601

Vaughan, Betty W., present Decatur, Alabama to P. O. Box 850, Decatur, Alabama 35601

Shelby County

Duke, Warren C., present Siluria, Alabama to P. O. Box 476, Talladega, Alabama 35160

Tuscaloosa County

Glass, Sarah E., present Tuscaloosa, Alabama to Baptist Specialty Care Center, Pensacola, Florida 32501

Guin, James C., Jr., present Tuscaloosa, Alabama to 225 University Blvd., No. 305, Tuscaloosa, Alabama 35401

Shields, James, present Tuscaloosa, Alabama to 703 Williamsburg East, Tuscaloosa, Alabama 35401

Simpson, William F., present Tuscaloosa, Alabama to 225 University Blvd., East, Tuscaloosa, Alabama 35401

Walker County

Harp, Richard D., present Jasper, Alabama to Route 4, Box 63, Jasper, Alabama 35501

Washington County

Webb, Virginia E., present Grove Hill, Alabama to Calvert, Alabama 36513

NEW TELEPHONE NUMBERS

Bennett, Austen L., Jefferson	933-2190
Brasfield, Milton S., III, Talladega	329-9074
Cannon, Harold E., Jefferson	595-0509
Collins, Harry G., Jefferson	822-8695
Denton, Robert O., Madison	536-0018
Dodson, William H., Jefferson	591-2758
Duke, Warren C., Shelby	362-8538
Durham, Henry S., Jr., Montgomery	269-2581
Fulton, William F., IV, Jefferson	591-2758
Fuson, Edna P., Marion	487-6431
Giles, Charles H., Jefferson	251-4231
Guin, James C., Jr., Tuscaloosa	345-7313
Handal, Eduardo, Jefferson	934-5131
Harp, Richard D., Walker	387-7025
Herlihy, Charles E., Jefferson	328-2031
Johnson, Lloyd, Jr., Lauderdale	766-8450
Majure, Ernest O., Elmore	283-2662
Marshall, W. L., Chambers	756-3111
McCain, Paul P., Morgan	353-0261
McCraw, Edward F., Butler	382-2681
McKee, Wilbur E., Mobile	865-6173
Miller, A. L., Jr., Jefferson	788-5692
Oberman, Albert, Jefferson	934-4140
Palmisano, Paul A., Jefferson	934-4584
Rogers, Earl McNichol, Morgan	355-7117
Shingleton, Hugh M., Jefferson	934-3393
Shugerman, Alwyn A., Jefferson	933-6630
Stroud, Robert M., Jefferson	324-6581
Thetford, Joseph D., Jefferson	322-5661
Till, Walter H., Autauga	365-3500
Wayland, James L., Colbert	383-7441
Webb, Virginia E., Washington	829-6215
Whitehead, Leslie E., Madison	539-4992
Wilson, Thomas A. S., Jefferson	933-2190

Discipline Ourselves?

The government is not a substitute for people, but simply the instrument through which they act. In the last analysis, our only freedom is the freedom to discipline ourselves.

—Bernard M. Baruch

Stanley Stark, M. D., president, Medical Society of the County of Kings and the Academy of Medicine of Brooklyn, Inc., led off his editorial on Peer Review with this Baruch quotation, and asked: "Will it be peer review that is effective now, or government review tomorrow?"

"Let us keep the freedom to discipline ourselves," he concluded.

Economical Long-Distance Telephoned Electrocardiographs

A simple technique of recording and compression of telephone-electrocardiographs (ECG) which reduces long-distance tolls is described. This recording technique also permits the ECG cart to be available to all beds in the hospital, and allows a delayed transmission to the interpretation or relay station.

A dressing cart with well-tracking casters and an attached long extension cord is arranged so that the ECG machine is parallel to the pushing handle at which the operator stands. Behind the ECG machine are, first, a monaural automatic-recording level high-fidelity multispeed tape recorder and, second, a battery-powered FM telephone transmitter. These are so connected that only a soft monitoring tone is heard from the tape recorder during the recording of the ECG. Exact details of both the transmitting and receiving equipment with wiring diagrams will be supplied upon request.

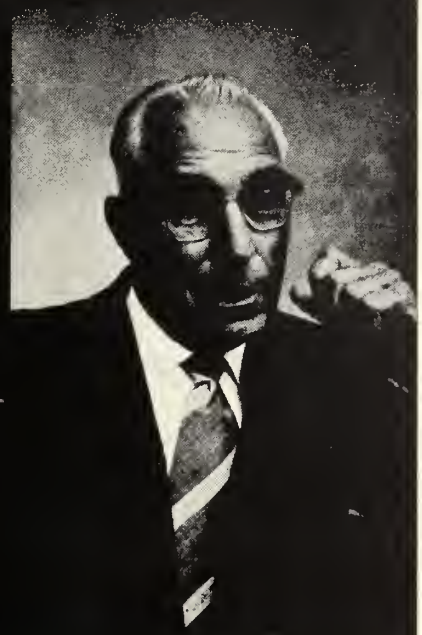
The technician should be supplied with an ECG requisition which, in addition to the usual data, should have an information code for the benefit of the interpreter to best assist that physician in the care of his patient. A suggested code which enables the technician to merely read the circled numbers into the microphone follows:

1. STAT TELEPHONED INTERPRETATION.
2. Recent anterior chest pain.
3. Recent pleuritic chest pain.
4. Condition critical.
5. Single Master's test.
6. Double Master's test.
7. Quinidine or Pronestyl in last 24 hours.
8. Digitalis preparation in last week.
9. Known old anterior MI.
10. Known old inferior or diaphragmatic MI.
11. Known old lateral MI.
12. Known old posterior MI (not inferior).
13. Known old septal MI.
14. Known previous RBBB.
15. Known previous LBBB.
16. Treatment suggestions requested.
17. Known to have had significant diastolic hypertension.
18. Previous ECG by interpreter.
19. Taking contraceptive pills.
20. Has thrombophlebitis.
21. Has had recent hemoptysis.

(Continued on Page 403)

Reprinted from Texas Medicine, May, 1970, Vol. 66, No. 5, pp. 31-33.

"Drug research gives me the tools that save lives."



A family doctor looks at new developments in the pharmaceutical industry. And he speculates on the future.

When I look back at some of my old records, I'm constantly reminded of the changes that have come about in medicine just during the past twenty-five years. Some of the diseases I treated and prayed over in the '40's are found mostly in medical history books now.

Thanks to drug research and development, we've made substantial gains in the control of cardiovascular disease, diabetes, malaria, mental illness, strep and staph infections, meningitis and a long list of ailments. It seems like only yesterday when a diagnosis of pneumonia was almost the kiss of death. Now, with modern medical techniques and drug therapy, we can offer some real help.

My records on polio, influenza and measles show an unbelievable trend for the better. New vaccines have reduced the toll of these age-old threats dramatically. And I see patients in pain from crippling arthritis helped with new medicinals unknown just a few years ago.

I hear questions about the three billion or so dollars spent by the drug industry in research during the past ten years . . . working on new and better drug products. It does seem like quite a bit of money to spend, and I realize some of it goes into dead ends. That's the problem with research, any research . . . you often don't know where you're going until you get there. I want all the tools I can get to help my patients. I want more drugs and more effective drugs. If they mean less pain, longer lives and more productive careers for those I treat . . . well, that's what really counts.

Another point of view . . .
Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.

This advertisement has been reaching consumers thru THE ATLANTIC, FAMILY HEALTH, HARPER'S MAGAZINE, NEWSWEEK, SATURDAY REVIEW, TIME and U.S. NEWS & WORLD REPORT.

Roche
announces

Efudex®

(fluorouracil)
cream/solution

for the treatment of solar/actinic keratoses... a topical alternative to conventional therapy

Fluorouracil—the Roche contribution

In 1962, Roche Laboratories introduced Fluorouracil Roche® (5-fluorouracil). Early clinical work with this drug suggested that it possessed a selective cytotoxic activity when applied topically to certain kinds of lesions. Based on this work and years of clinical trials, a standardized form of topical fluorouracil can now be recommended for treatment of multiple solar or actinic keratoses.

Efudex®(fluorouracil)—a new alternative to conventional therapy

Efudex presents the physician with a topical alternative to surgery in the treatment of solar or actinic keratoses. It is effective, comparatively inexpensive and especially well-suited for treatment of multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

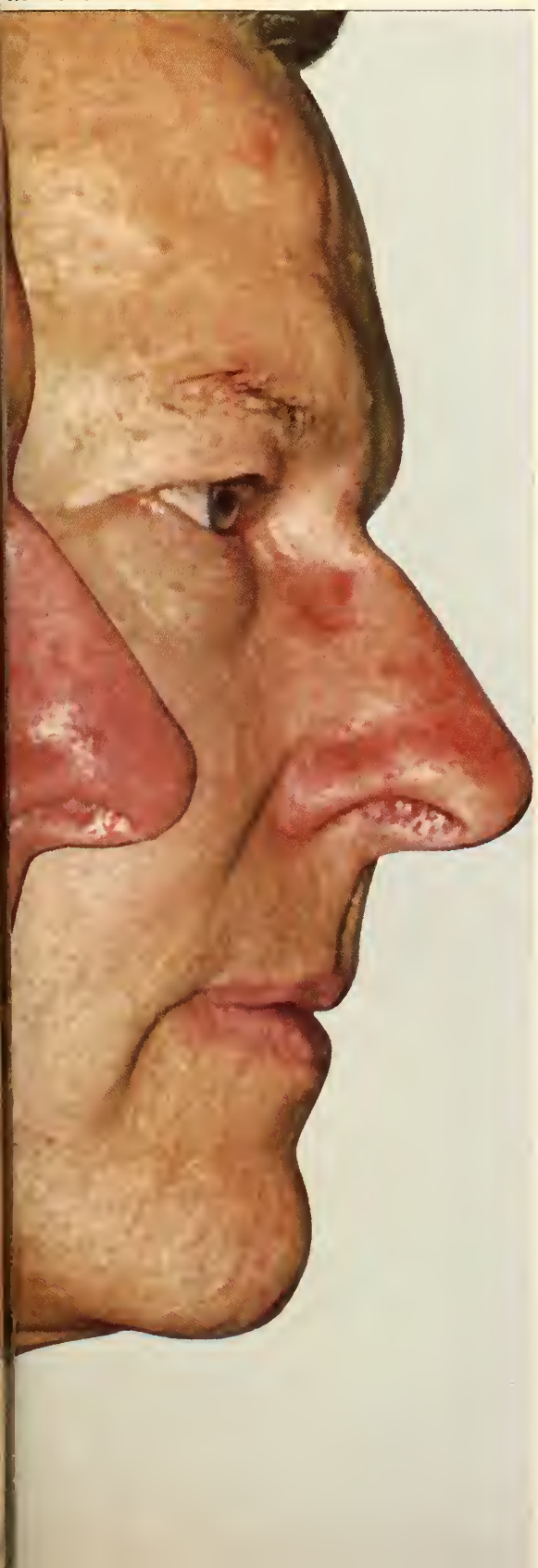
Highly effective on first and later applications

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When lesions did recur or new ones appeared, repeated courses of Efudex therapy proved effective.*

1/22/68—Treatment with 5% 5-FU cream commences. Patient K.L. showing widespread but mild solar keratoses (also known as actinic keratoses).

2/2/68—After 11 days of treatment. Erythema is seen at site of keratoses. In addition, numerous lesions not apparent prior to therapy have become manifest by sharply defined reactions. Intervening skin, also treated, shows no response to therapy.

2/19/69—One year after cessation of therapy. Skin appears clear with no evidence of scarring. Examination reveals lack of recurrence or the formation of new lesions.



Predictable sequence of therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of the keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two to three months before gradually receding.

Selective—with a high degree of safety

Despite the temporary unsightliness and discomfort of the inflammatory episode, Efudex is, in general, more readily tolerated than surgery. Clinical work shows the intense inflammatory response to be limited to the area of the lesion. Normal skin is not similarly affected. Another measure of Efudex safety: systemic absorption of topical fluorouracil was insignificant, indicating a low risk of systemic toxicity.*

Two strengths—two convenient dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, there are two important considerations. First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

2% and 5% Solutions; 5% Cream Applied twice daily—resolves solar or actinic keratoses.

new Efudex® (fluorouracil) cream/solution

For full prescribing information, please see the following page.

Roche introduces

Efudex®

(fluorouracil) cream/solution the new standardized topical for solar/actinic keratoses

Description: Efudex solutions and cream are topical preparations containing the fluorinated pyrimidine 5-fluorouracil, an antineoplastic antimetabolite.

Efudex Solution consists of 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris-(hydroxymethyl) aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream contains 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Actions: There is evidence that the metabolism of fluorouracil in the anabolic pathway blocks the methylation reaction of deoxyuridylic acid to thymidylic acid. In this fashion fluorouracil interferes with the synthesis of deoxyribonucleic acid (DNA) and to a lesser extent inhibits the formation of ribonucleic acid (RNA). Since DNA and RNA are essential for cell division and growth, the effect of fluorouracil may be to create a thymine deficiency which provokes unbalanced growth and death of the cell. The effects of DNA and RNA deprivation are most marked on those cells which grow more rapidly and which take up fluorouracil at a more rapid pace. The catabolic metabolism of fluorouracil results in degradative products (*e.g.*, CO_2, urea, α-fluoro-β-alanine) which are inactive.

Studies in man with topical application of ^{14}C-labeled Efudex demonstrated insignificant absorption as measured by ^{14}C content of plasma, urine and respiratory CO_2.

Indications: Efudex is recommended for the topical treatment of multiple actinic or solar keratoses.

Contraindications: Efudex is contraindicated in patients with known hypersensitivity to any of its components.

Warnings: If an occlusive dressing is used, there may be an increase in the incidence of inflammatory reactions in the adjacent normal skin.

Prolonged exposure to ultraviolet rays should be avoided while under treatment with Efudex because the intensity of the reaction may be increased.

Usage in Pregnancy: Safety for use in pregnancy has not been established.

Precautions: If Efudex is applied with the fingers, the hands should be washed immediately afterward. Efudex should be applied with care near the eyes, nose and mouth. To rule out the presence of a frank neoplasm, a biopsy should be made of those areas failing to respond to treatment or recurring after treatment.

Adverse Reactions: The most frequently encountered local reactions were pain, pruritus, hyperpigmentation and burning at the site of application. Other local reactions included dermatitis, scarring, soreness and tenderness.

Also reported were insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity and lacrimation.

Laboratory abnormalities reported were leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Efudex should be applied twice daily with a nonmetal applicator or suitable glove in an amount of the solution or cream sufficient to cover the lesion. When Efudex is applied to a lesion, a response occurs with the following sequence: erythema, usually followed by vesiculation, erosion, ulceration, necrosis and epithelization. The lower frequency and intensity of activity in adjacent normal skin indicate a selective cytotoxic property. Medication should be continued until the inflammatory reaction reaches the erosion, necrosis and ulceration stage, at which time use of the drug should be terminated. The usual duration of therapy is from 2 to 4 weeks. Complete healing of the lesion may not be evident for 1 to 2 months following cessation of Efudex therapy.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Clinical Studies: The effectiveness of the three preparations as determined by complete involution of solar keratoses was: 2% Solution, 77% of 282 lesions; 5% Solution, 88% of 202 lesions; and 5% Cream, 85% of 189 lesions. In those lesions where complete involution followed treatment, the rate of possible recurrences observed clinically at periods up to 12 months or more was: 2% Solution, 4.6% of 218 lesions; 5% Solution, 1.7% of 177 lesions; and 5% Cream, 5.6% of 160 lesions. Because of the toxic potential of fluorouracil, some physicians preferred to use the 2% solution when large areas were to be treated. Approximately 30% of the lesions required treatment for two weeks or less; approximately 78% required four weeks or less for adequate treatment.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

(Continued from Page 398)

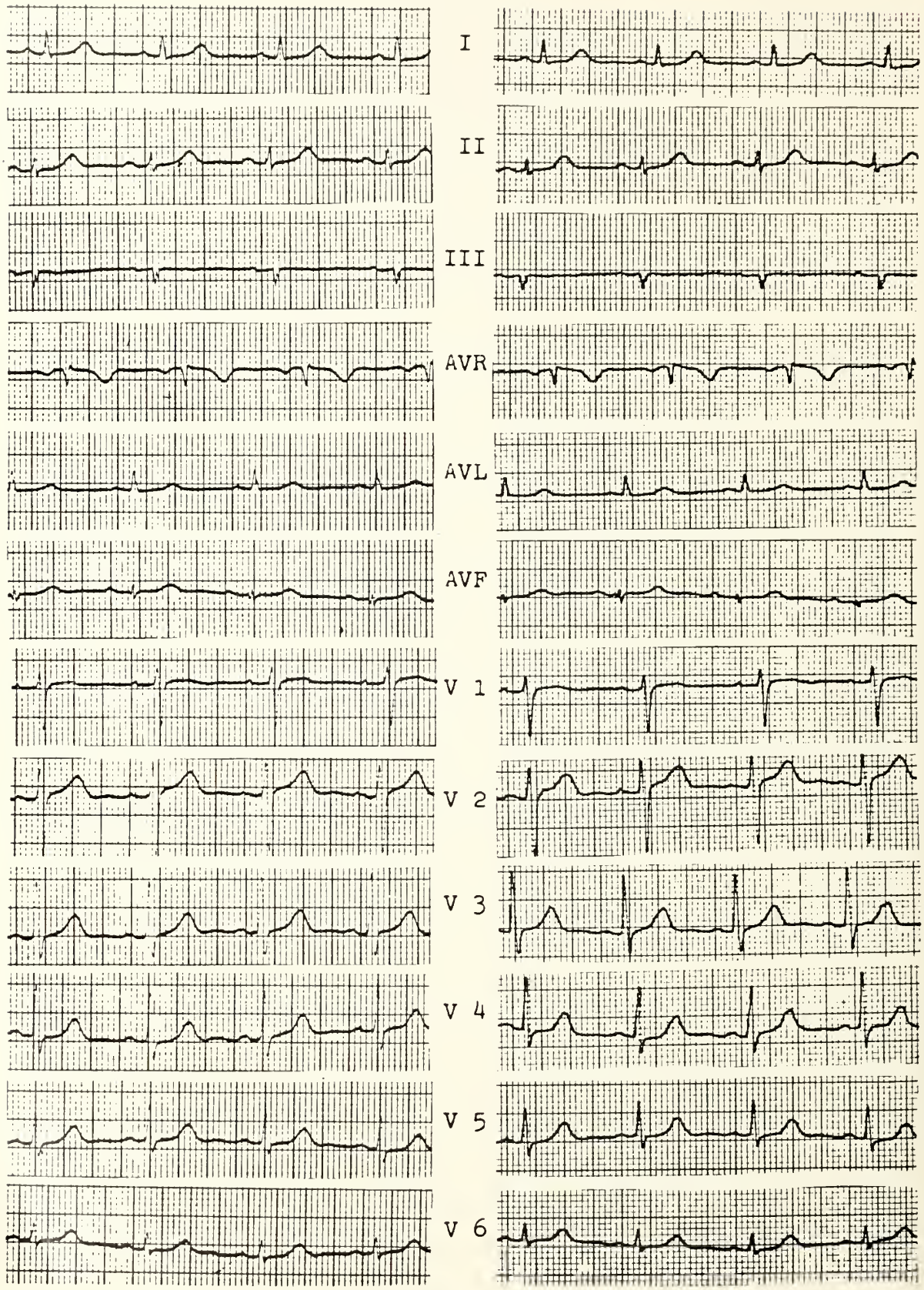
22. Known previous pulmonary embolism.
23. Known hypokalemia.
24. Known hyperkalemia.
25. Known hypocalcemia.
26. Known hypercalcemia.
27. Has chronic pulmonary disease.
28. Just over an episode of tachycardia.
29. Suspected mitral disease.
30. Suspected aortic valve disease.

With this ECG requisition in hand, the technician pushes the ECG cart to a quiet private area, plugs the extension cord in to the wall current, switches the external speaker to "Off," and places the microphone plug into the "MIC" jack. The recorder speed is set at 3¾ inches per second (ips), and the number of the tracing is given ("Tracing number one, or two, etc"), as is the patient's name, age, room number, and name of physician. Then, "Code" is stated, followed by the appropriate circled numbers. The recorder is then placed in the "Stop" position and the speed is changed to 7½ ips. Again recorded is "One," or the appropriate number of the tracing in sequence on the tape. Then, if STAT has been circled, the word "STAT" is stated at 7½ ips, thereby allowing the monitored and written-out tracing to be noted as STAT. The technician then removes the microphone plug from its jack, turns on the FM telephone transmitter and the ECG, with the ECG on Single Standardization. The external speaker switch is moved from "Off" to "Soft," and ten standardizations are recorded. These can be recognized and heard from the monitor speaker of the recorder and are done at 7½ ips as was the serial number of that tracing. (After the first tracing only two or three such standardizations are necessary at the beginning of an ECG recording.) The technician then unplugs the extension cord from the wall, turns off the FM telephone transmitter, and pushes the ECG cart to the patient's bedside.

The patient is prepared with the most critical of techniques—all electrodes shining, skin scrubbed with alcohol, etc, as the perfection necessary at the receiving station can be no better than the original tracing. With the patient prepared and the electrodes attached, including V_1, lead I is run as usual by the technician, using the marking stylus and making the length of paper desired for mounting. Then the paper is stopped from running but the writing stylus is left "bouncing." The FM transmitter is turned on, and the recorder is placed in the recording mode on "Pause." If the patient can, he holds his breath in slight inspiration, and when the base line has no wandering the tape recorder is run for some five QRS complexes, a standardization marker being placed between the first two, then the recorder is again placed on "Pause." Then a regular lead II is run and marked as desired, and again the process is repeated with the tape recorder with the paper not running. This allows the technician to concentrate on the recorder, a straight base line, and the standardization code placed between the first two QRS complexes (which are audible on the monitor). Each of the first three leads is coded with a single short flash, the unipolar extremity leads with a single longer flash, and then the precordial leads with a single short flash between the first two complexes heard on the monitor. Lead VB is much preferred and should appear as the seventh lead after AVF. Should there be an irregularity present, lead V_2 is selected to run some 20 or 30 QRS complexes. If some difficulty develops while any one lead is being recorded, the tape recorder can be rewound slightly to the beginning of that lead and again recorded with a straight base line. This horizontal base line in the left precordial leads is a necessity, and can be obtained best by having the patient hold his breath in slight inspiration.

After lead VB has been recorded, the FM transmitter is turned off, the tape recorder placed in "Stop" position, and the ECG selector switch again returned to "Single Standardization."

Precordial leads with high voltage should be recorded at ½ standardization, and the


I
II
III
AVR
AVL
AVF
V 1
V 2
V 3
V 4
V 5
V 6

stylus kept toward the bottom of the graph paper. The standardization marking between the first two QRS complexes will allow the interpreter to know of its reduction. Likewise, for lead VB a double standardization may be necessary, and this information will likewise be recorded by the standardization code between the first two QRS complexes.

The technician now removes the electrodes, cleans them, and proceeds to repeat the process with the next patient. That is: the information is given at 3¾ ips, the serial number of the tracing and some standardization flashes are given at 7½ ips, and the ECG is recorded at 7½ ips. When all of the assigned tracings have been graphed and recorded, the technician returns the ECG cart to its location by a telephone. When no more tracings are to be done and when prepared to transmit the recordings, the tape is rewound. A transmitting coil is held around the ear piece of the telephone and its plug is placed in the external speaker jack of the tape recorder. When the receiving station telephone is connected, the technician gives the name of the hospital and turns on the tape recorder to run at 7½ ips using the telephone to monitor the transmission. This induction technique should be done so as to sound fairly loud to the technician, and should be constant after experience has determined what volume setting is satisfactory.

This transmission has been r e c e i v e d through a similar automatic-recording level tape recorder running at 7½ ips while its external speaker jack has had a plug inserted which drives some earphones as well as the ECG write-out mechanism. The reception is actually monitored by means of the telephone, and a direct write-out is performed to reduce distortions which might be introduced by the tape recorders. The detailed information and coding is obtained by the receiving station replaying the tape at 3¾ ips. Another write-out at 7½ ips is easily performed should the original write-out have failed for lack of paper, etc.

Although complicated in explanation, with short practice by experienced ECG technicians this technique is easily mastered, and an unbelievable amount of "on line" time is saved. By this same compression technique of speech (2X) the interpretations can be dictated to the tape recorder at the interpretation station at 3¾ ips and then transmitted to the hospital's tape recorder (equipped with a receiving coil plugged into the "MIC" jack) at 7½ ips on both recorders. Then, by replaying this tape at the hospital at 3¾ ips, the details of the interpretations and suggestions can be written on the hospital's mounted ECG. The interpretation station keeps its tracing for purposes of serial tracing comparisons.

—Dr. Schreiber,
1430 Medical Arts Bldg.
Dallas 75201

SAMPLE

The electrocardiographic tracing on the left is a photographic reproduction of the mounted original tracing. The tracing on the right is a photographic reproduction of the mounted write-out tracing. While the original tracing was being run on the electrocardiograph an FM transmitter was silently being recorded on a high fidelity tape recorder. This tape recorder was then rewound and then silently played into the telephone by means of a transmission induction coil. This was then received on another telephone line and the writeout was performed. Any change in the upstroke width of the original tracings are due to the characteristics of the particular machine utilized.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

Anesthesiology—

University of Nebraska, 1965, Board certified, seeking solo, group or associate practice. Available July 1971. LW-1

Dermatology—

Age 32; State University of New York, 1964; National Board; Board eligible; seeking solo, group or associate practice. Available July 1971. LW-2

Age 32; Duke University, 1961, Board eligible; Available February 1971. LW-2/1

Age 36; University of Wisconsin 1964; seeking solo, group or associate practice. Available July 1971. LW-2/2

General Practice—

Age 28; Medical College of Alabama, 1967; National Board; serving general surgery residency Available July 1971. LW-3

Age 49; University of Pittsburgh, 1951; seeking group or industrial practice. LW-3/1

Age 27; George Washington University 1969; National Board; Available July 1971. LW-3/2

Internal Medicine—

Age 34; Georgetown University, 1962; Board certified; seeking group or associate practice. Available August 1971. LW-4

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 33; Medical College of Alabama, 1963; National Board; Available January 1971. LW-4/1

Age 30; New York University, 1965; Board eligible; National Board; interest in cardiology. LW-4/2

Age 31; University of Arkansas, 1964; Board certified; seeking group or associate practice, interest in cardiology. Available July 1971. LW-4/3

Age 31; Albert Einstein College, 1964; National Board, seeking group, associate or institutional practice. Available July 1971. LW-13

Age 34; Louisiana State University, 1963; Board certified; seeking group practice. Available August 1971. LW-13/5

Obstetrics-Gynecology—

Age 44; Louisiana State University, 1956; Board certified; seeking solo, group, industrial, associate practice. LW-5

Ophthalmology—

Age 30; University of Nebraska, 1965; seeking group or associate practice. Available July 1971. LW-6

Otolaryngology—

Age 33; Loyola University, 1964; Board eligible; seeking solo or associate practice. Available July 1971. LW-7

Age 33; Wayne State University, 1966; Available July 1971. LW-7/1

Age 31; Northwestern University, 1964; Board eligible; National Board; seeking solo, group or associate practice. Available September 1971. LW-7/2

Pathology—

Age 32; Case Western Reserve University, 1964; National Board; Board certified; seeking group, associate or institutional practice. Avialable August 1971. LW-8

Age 33; Creighton, 1964; Board certified; National Board; seeking group or associate practice. Available July 1971. LW-8/1

Age 41; Louisiana State University, 1956; Board certified; seeking solo or associate practice. Available late 1970. LW-20

Age 30; University of Texas, 1967; seeking solo, group or associate practice. Available March 1971. LW-22

Psychiatry—

Age 47; Mainz Medical University, Germany, 1957: Board eligible; seeking group industrial, associate or institutional practice. LW-9

Radiology—

Age 31; University of Kansas, 1965, seeking group practice. Available July 1971. LW-10

Age 32; Medical College of Alabama, 1963; completing residency in radiology. LW-24/2

Age 31; Vanderbilt University, 1965; National Board; Board certified; seeking group or associate practice. Available July 1971. LW-10/1

Age 35; University of North Carolina, 1961, Board eligible; Available early 1971. LW-10/2

Age 30; University of Kentucky 1965; Board eligible; seeking group, or associate practice. Available July 1971. LW-10/3

Surgery—

Age 30; Medical College of Alabama 1965; National Board; Board eligible; interested also in general practice with surgery; Available July 1972. LW-11

Age 31; Medical College of Alabama 1964; National Board. Available July 1971. LW-31/6

Age 36; Emory University, 1959; Board certified; seeking associate practice. LW-31/5

Locations Wanted

Age 31; Johns Hopkins 1964; Board eligible; seeking solo, group, associate or institutional practice. Available July 1971. LW-31/2

Urology—

Age 33; University of Chicago 1963; Board eligible; interested in academic affiliation. Available August 1971. LW-12

Physicians Wanted

Special Openings—

Qualified specialists wanted for private practice in internal medicine, general surgery, Ob-Gyn, general practice, pediatrics, anesthesiology, orthopedics, and other sub-specialties. Office space in 250-bed private hospital, Guaranteed initial income and other benefits. PW-17

General surgeon, Board certified, needs young associate to do general practice including obstetrics. Salary negotiable. PW-19

Two physicians, ages 39 and 40, are interviewing for a select individual to enter association in a university town of 80,000 population. Outstanding new physical plant. Readily available hospital privileges. Four and one-half day work week. Three free weekends per month. PW-19/2

Specialist in the following fields: Internal Medicine, Pediatrics, Obstetrics-Gynecology and General Practitioners. 58-bed fully accredited general hospital with 91-bed addition recently completed. Modern new office space available. PW-20

Pediatrician, Internist, and ENT specialist to join a well-established group practice in a community of 40,000 in East Alabama. The community has a 125-bed accredited hospital, 32-bed extended care facility. Good transportation on interstate with quick access to metropolitan area. Will pay travel expense for interview. PW-20-1

Opportunity for ENT, Internal Medicine, and Orthopedic Surgery practitioners to join partnership at clinic located in city of 38,000 population in trade area of 150,000 population in northeast Alabama. PW-20/2

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Position available for a clinic physician with special Family Planning Project of the Jefferson County Department of Health. Salary range $20,000 to $24,000, depending on amount of training in Obstetrics and Gynecology and Family Planning. PW-26/1

Obstetrician-Gynecologist—

Excellent opportunity for a trained Ob-Gyn man, who would join a two-man partnership in city of 30,000 population located in south central Alabama. Salary is proposed for the first year, with partnership thereafter. PW-25

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Opportunity in town of 4,000 population in trade area of 50,000 population, located within 100 miles of two metropolitan areas in south Alabama. Industrial and farming area. 44-bed hospital. Office space and equipment available in new building with another physician. Several churches, schools, and service clubs. PW-1

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

For town of 10,000 population in county of 40,000 population located in scenic mountainous section of Northeast Alabama. Office space and equipment available. Hill-Burton hospital-nursing home. Expanding industries in top agricultural area. PW-1-2

For community of 2,000 population, plus large trade area, located in Southeast Alabama. Modern clinic, fully equipped. PW-1-3

Physician wanted to join 39 year old Medical College of Alabama graduate in a well established practice in West Central Alabama town. Salary initially followed by full partnership. PW-1-4

Hospital based professional association in suburb of Birmingham is seeking a young general practitioner who has completed military obligation. High income, profit sharing, paid vacation and retirement plan. Complete facilities available. No investment required. PW-1-5

Opportunity in town of 2,500 population in Northeast Alabama in trade area of 15,000 population, located 7 miles from city of 55,000, and four miles from a 300-bed modern hospital. Position available for one who has not served military commitment. Clinic building and some equipment available. Willing to build a new clinic for two doctors or a small group. Especially seeking general practitioner and internist. PW-1-7

The Month in Washington

From the Washington Office
American Medical Association

The American Medical Association challenged charges of widespread tax cheating by physicians and renewed its offer to cooperate with the government in cracking down on dishonest doctors.

In letters to Sen. Russell B. Long (D., La.), chairman of the Senate Finance Committee, Walter C. Bornemeier, M. D., president of the AMA, answered the tax cheating charges and Ernest B. Howard, M. D., executive vice president of the AMA, renewed the offer of cooperation. But Howard also said that mandatory reporting of unassigned fees by insurance agencies would be an ineffective and unfair way to try to uncover doctors cheating on their income taxes on payments for their services under medicare and medicaid.

The tax-cheating charges grew out of testimony given by Meade Whitaker, who then was tax legislative counsel for the Treasury Department, at a hearing of the Senate Finance Committee during its consideration of changes in the medicare and medicaid programs. He said that many providers of services under the two health care programs might have "substantial deficiencies" in their income tax returns.

In a letter to Long and Sen. Wallace F. Bennett (R., Utah), a ranking minority member of the finance committee, Dr. Bornemeier said that the charges had been widely distorted in the press and these reports do the medical profession a serious injustice.

Whitaker testified that from an original list of 11,000 who received payments of $25,000 or more for services rendered under medicare and medicaid in 1968, 4,000 returns warranted a detailed audit by the IRS.

With preliminary audits completed on 3,000 of the 4,000 returns, there were indications that 1,500 of these showed "substantial deficiencies," the Treasury reported. Substantial deficiencies" later were defined as being underpayments of more than $100.

Dr. Howard said that "the dishonest or incompetent physician hurts us just as much as he harms his government."

Dr. Howard said that a recent statement by Long that the AMA had been "completely forthright and honorable, and sought to shield no one" is "exactly our position."

The AMA official also noted that Long at a recent hearing of the finance committee had referred correctly to previous requests by the AMA that it be given examples of suspected chicanery by physicians in government health programs "so that we might take our own action."

As for mandatory reporting of unassigned medical payments—those given to the patient rather than to the physician—Dr. Howard said such a requirement "would not provide the Internal Revenue Service with helpful and meaningful data." He urged rejection of such an amendment proposed by the Treasury Department. A joint House-Senate conference committee rejected it last year in considering tax reform legislation.

The Treasury Department proposed that Blue Cross-Blue Shield organizations, medicare and medicaid agencies, and other health insurance carriers be required to report unassigned payments for medical services.

* * *

President Nixon, at a bill-signing ceremony, praised the new Drug Abuse Act for providing "a forward looking program" for treatment of drug addiction as well as strengthening the government's law enforcement powers in the field.

(Continued on Page 413)

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select
Silain-Gel® Tablets:

when the patient prefers a liquid, select
Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide

Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

The Doctor

One of the doctor's most important roles is in education.

For his patients, the physician provides the facts, supplies the rationale, triggers the action for life-saving health practices. To his students, he passes on his knowledge and the benefits of his clinical experience. With his colleagues, he shares new information and concepts.

Assisting the doctor in his teaching role is a major function of our professional education program. Through medical conferences, films, exhibits, pamphlets, monographs and other publications, we provide him with the most important and current information on cancer.

If, as Henry Brooks Adams speculated, "A teacher affects eternity; he can never tell where his influence stops", the outlook is optimistic.

(Continued from Page 408)

The new law provides for the Department of Health, Education and Welfare running extensive programs for the treatment and rehabilitation of drug users and for antidrug education. It authorizes HEW's National Institute of Mental Health to spend $189 million over three years to build and staff treatment facilities, to support rehabilitation programs and to increase antidrug education programs. Another $1 million is authorized for creation of a presidential commission on marijuana.

State comprehensive health plans getting federal aid must now include drug abuse programs, and an Administration spokesman suggested that all states model their drug control laws on the federal statute.

The new law broadens the former narcotics statute to include, with varying restrictions and controls, amphetamines, barbiturates and other drugs ruled dangerous. At the start, controls will be drastically tightened over marketing the liquid form of amphetamines which can be taken by injection.

Other health legislation recently enacted into law included:

—The Communicable Disease Control Act of 1970 which authorizes expenditure of $210 over the next three years for vaccination and other control programs against tuberculosis, venereal disease, German measles, measles, polio, diphtheria, tetanus, whooping cough, RH disease, and other diseases judged by the Secretary of Health, Education and Welfare to be major problems.

—The Regional Medical Programs and Comprehensive Planning and Services Act of 1970 extending the programs for three years with authorized spending of $545 million for RMP and $52 for CHP. Further appropriations totalling $961.5 million for project grants for areawide health planning; training, studies and demonstrations; comprehensive public health services, and health services development. RMP is expanded to include kidney disease. The new law provides for a systems analysis of national health care plans and for a cost and coverage report on such legislation. A National Advisory Council on Comprehensive Health Planning Programs is created.

—The Health Training Improvement Act of 1970 which extends the allied health educational program for three years with aid to schools and students. Authorized appropriations total $308.5 million. The maximum yearly loan will be $1500 and the maximum aggregate loan, $6,000, for any student. A forgiveness of up to 50 per cent will be allowed if the student practices in a shortage area or for a nonprofit organization after graduation.

—The Developmental Disabilities Services and Facilities Construction Amendments of 1970 extending the mental retardation facilities construction program for three years and expanding it to include grants for planning, provision of services, and construction and operation of facilities for persons with developmental disabilities. Authorized appropriations total $295 million.

CONFORMITY

If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him keep step to music which he hears, however measured or far away.

—Henry David Thoreau

The first forty years of life give us the text; the next thirty supply the commentary.

—Arthur Schopenhauer

The world is full of willing people; some willing to work, the rest willing to let them.

—Robert Frost

Family Planning--A Health Priority

Family planning services should be readily available to all Alabamians without limitation because of economic status, according to recommendations by the Alabama Advisory Council for Comprehensive Health Planning which have received State Board of Health approval.

Many families in Alabama have long had a choice about the size of their families and the spacing of their children. Some of the very poor, however, have not had this choice. While a number of these have not understood that scientific methods make family planning possible, others have not planned their families because no convenient services are available and they have no means of paying for the necessary services and supplies.

Alabama was a pioneer in family planning in 1938 when the State Board of Health gave the idea its unanimous approval and the Bureau of Maternal and Child Health incorporated this service on a statewide basis. Child spacing was offered for one purpose—to improve the health and well being of mothers and babies. And while this is still a primary purpose of family planning, a broader program is needed.

Public health legislation enacted on the federal level in 1966 and strengthened by amendments in 1967 provides special federal incentives to encourage states and communities to analyze their total health and medical resources and develop comprehensive health plans to meet the priority health needs of their people. Family planning is one of the six programs which the surgeon general declared to be of high priority in all parts of the nation. This priority emphasizes the goal of making family planning an integral part of comprehensive health services which assure essential services to all people in all parts of the country.

In exercising this priority, the Alabama Advisory Council for Comprehensive Health Planning made a number of recommendations regarding maternal and child health and family planning which have received State Board of Health approval including:

—That public agencies providing family planning services be encouraged to increase educational programs on family planning with special emphasis on reaching indigent women of child bearing age.

—That every expectant mother have the opportunity to give birth to her child either in a hospital or attended by a competent midwife.

—That utilization of midwives, except those of demonstrated competence such as nurse-midwives, be discouraged.

—That there be a minimum of four additional "complication centers" to supplement the centers now in Birmingham, Mobile, and Tuskegee. Thus, each of the seven hospital districts would have at least one center for the special care of complicated obstetric cases.

—That uniform service delivery require mechanisms which would permit medically indigent patients to come to service centers without regard to the specific county of residence.

—That each county in the state be encouraged to identify funds for health programs and make them available for both local and regional purposes.

—That maternal and child health goals depend heavily on more realistic attitudes toward certain moral and social issues. Special effort should be directed to encourage legislation to:

Liberalize abortion in case of rape or incest or where there is reasonable likelihood of a serious deformity or malformation of the child.

Permit unwed pregnant girls to remain in school and unwed mothers to

return to school without an extended waiting period.

Permit physicians to treat VD, prescribe contraceptives, and provide prenatal care to minors without requirement to notify parents or obtain parental consent.

—That funds be encouraged for expanded training programs for allied health workers in pediatrics and obstetrics—such as pediatric and obstetrical assistants, nurse midwife and pediatric nurse.

—That public agencies providing family planning and other maternal and child health services be encouraged to direct special attention to the prevention of illegitimate births.

—That individuals, public and private agencies concerned with over-population be encouraged to emphasize educational programs calling for the voluntary limitation of families to not more than three children.

The advisory council says that family planning programs should be expanded. This, they believe, is one effective method of reducing the poverty problem, improving the public health, and making a significant impact upon the quality of life in this state.

WHICH?

One speaker squelched a "hissing" heckler by this direct method: "There are only three things that hiss—a goose, a snake, and a fool. Identify yourself!"

—M. Dale Baughman

Never was a good work done without much trouble.

—Culinary Almanac

I am convinced digestion is the great secret of life.

—Sydney Smith

Walking Off Your Troubles

Sometimes I think that the tensions which plague modern Americans stem less from troubled times than from the automobile. With little occasion for walking, we store up psychomotor energies our grandparents would have left along the sidewalks or the bridle paths. Certainly, rhythmic body movements help to fight off tenseness and emotional upset, even to the point of building courage for heroic feats, as the almost universal rites of the war dance have proved. When you want tranquility, plain walking, rowing or other repetitive simple movements often fill the bill.*

---

*John E. Eichenlaub, M. D.,: *The Minnesota Doctor's Home Treasury of Unusual Stress Easers,* 1964.

Ef-
fic-
iency

Dicarbosil®
ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Recommendations For Sulfonamides

Since many bacteriology units are heavily involved in antibiotic sensitivity testing, this item from the Food and Drug Administration will be of interest. The FDA considered the increasing frequency of bacterial resistance to sulfa drugs and the introduction of many more effective agents. Therefore, the National Academy of Sciences—National Research Council was asked to evaluate the short-acting systemic sulfonamides. On the basis of their findings and other available data, the short-acting systemic sulfa drugs are recommended by the FDA only for the following conditions.

1. Chancroid
2. Trachoma
3. Inclusion Conjunctivitis
4. Nocardiosis
5. Uncomplicated urinary tract infections due to susceptible organisms such as *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris.*
6. Toxoplasmosis, as adjunctive therapy with pyrimethamine.
7. Malaria due to chloroquine-resistant strains of *Plasmodium falciparum* when used as adjunctive therapy.
8. Meningococcal meningitis where the organisms have been demonstrated to be susceptible.
9. *Hemophilus influenzae* meningitis as adjunctive therapy with parenteral streptomycin.
10. Prophylaxis of rheumatic fever, as an alternative to penicillin: only sulfadiazine has been demonstrated to have substantial evidence of effectiveness.

Since the long-acting sulfonamides have the same range of effectiveness but are more hazardous, the short-acting preparations are preferred. Furthermore, sulfas are not recommended for common respiratory, skin, soft tissue, GI, chronic obstructive urinary tract infections because of their adverse effects and general ineffectiveness in these conditions. Only for rheumatic fever is sulfadiazine listed as an agent for prophylaxis.—Laboratory Newsletter, Wisconsin State Laboratory of Hygiene.

—Wisconsin Medical Journal

Lip And Cheek

written for the *Journal*

by William W. Travis

THE PEDIATRICIAN

Said Pediatrician David Young, M. D.,
Who had needled a patient, aged three,
"You see, there's no pain,
But I'll do it again
If you don't come down from that tree."

THE MEDICAL SOCIETY

Longevity of the species increases
Following all new medical theses,
But the doctor's best tools
Are the ancient thumb rules
Like, "Bleeding always ceases."

THE E. N. T.

"Disrobe, Ma'am," said Earl Earlobe, M. D.,
A resident in E., N., and T.
"My range is quite close—
Down to bronchials at most,
But in your case it's up from the knee."

THE G. P.

Claude Tongueblade, M. D., eschews levers
Such as poxes and other gross peevers,
Which work for his gain
Through misfortune and pain,
But he's thankful, withal, for small fevers.

COUNTY HEALTH OFFICER

Spirochetes are pathogens rude;
Their function exceedingly crude:
They'll mess up your skin
And the organs within
If you promiscuate in the nude.

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

NOTE: *The high therapeutic index of Trocinate permits administration in dosage sufficient to relax smooth muscle spasm promptly. 400 mg. dosage usually exceeds a therapeutic blood level. In reducing dosage after relief lengthen the time between doses rather than lowering the recommended dose. Prescribe The prompt relief and sense of consciousness of the first interval of return of symptoms are a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

The Pig

Pig of My Heart—So much of our indebtedness to you is taken for granted that I want to write you a few lines of appreciation. For your friendliness to man knows no abatement; I believe that every day you come to our rescue more and more; every day, all over England, to the traveler's question, "What have you for lunch?" the answer is more frequently returned, "I'm sorry, but there's nothing but eggs and bacon." The innkeeper's sorrow matters nothing, because directly we hear the word bacon our hearts leap up.

A lot of rubbish has been talked (and sung) about the roast beef of Old England. The national dish of this great country is bacon—a gift from you. Eggs no doubt can be an agreeable accessory, but it would be an ungracious act in a letter intended to celebrate your merit to stress them overmuch. Bacon alone is food for the gods.

But bacon is not all. What of ham? What of brawn? What of pork? What of Bath chop? What of sausages? All these blessings we owe to you. Forgive me, however, if I am dwelling too long on what, after all, cannot be unmixedly agreeable hearing for yourself, since, in order to give us these noble dishes you must first have passed away.

Finally, a word of thanks for your assistance in helping us out in invective—I am sure not by your own wish, but very usefully none the less. The people that we don't like, whether for particular or general reasons—what do we call them? We ought really to search our minds for the accurate epithet minutely applicable to each; but we are too lazy for that. So—very unfairly— we fall back on you and merely say they are pigs. The child who eats too quickly, the man who won't have the window open in the railway carriage, the woman who edges her way unjustly into a queue, the boy who demurs at the punctual bath—each is rapidly characterized as a pig. As I say, it saves us trouble to think no further and to borrow your name in this way; but it isn't fair, because they did not go to you to learn these habits; they were behaving naturallly.

—Edward Verrall Lucas (1868-1938)

How To Schedule Free Time

One of our colleagues, finding himself desperately scheduled with a committee, journal club, or community service meeting every evening of one week, decided upon a new method of allocating his time. He used his horoscope in the evening paper.

Monday night he was advised, "Fulfill your obligations to the best of your ability," and attended his meeting.

Tuesday's advice was, "Your first duty is to your family," and he stayed home.

Wednesday night the o r a c l e said, "Romance is in the offing," and his wife made him stay home.

On Thursday, "Excitement is on the horizon," sent him cheerfully off to a hospital departmental meeting before his wife could read the paper.

Friday's column told him, "Consider the alternatives carefully." It was his wife's turn to entertain her bridge club, and he had little problem in preferring to go to the Library Committee of the PTA.

He now swears by the system.

—*Delaware Medical Journal*

How Not To Reach The Top

You'll never get to the top if you make a practice of blowing yours.

—North Carolina Education

Don't make excuses; make good.

—Elbert Hubbard

INDEX TO ADVERTISERS

Arch Laboratories ... 415

Blue Cross/Blue Shield ... 3rd Cover
The Bradley Center ... 409

Campbell Soup Company ... 387
Classified ... 367

Guest House Motel ... 375

Highland Hospital ... 419
Hynson, Westcott & Dunning ... 363

Lederle Laboratories ... 365
Eli Lilly & Co. ... 1st Cover, 378

Medicenters of America ... 2nd Cover

Pharmaceutical Mfg. Assn. ... 399
William P. Poythress ... 417, 418

A. H. Robins Co. ... 369, 370, 371, 410, 411
Roche Laboratories ... 400, 401, 402, 4th Cover

Schering Corporation ... 376, 377
G. D. Searle ... 388, 389
Smith, Kline & French ... 390
Stuart Pharmaceuticals ... 392, 393

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA
Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY
Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*
or

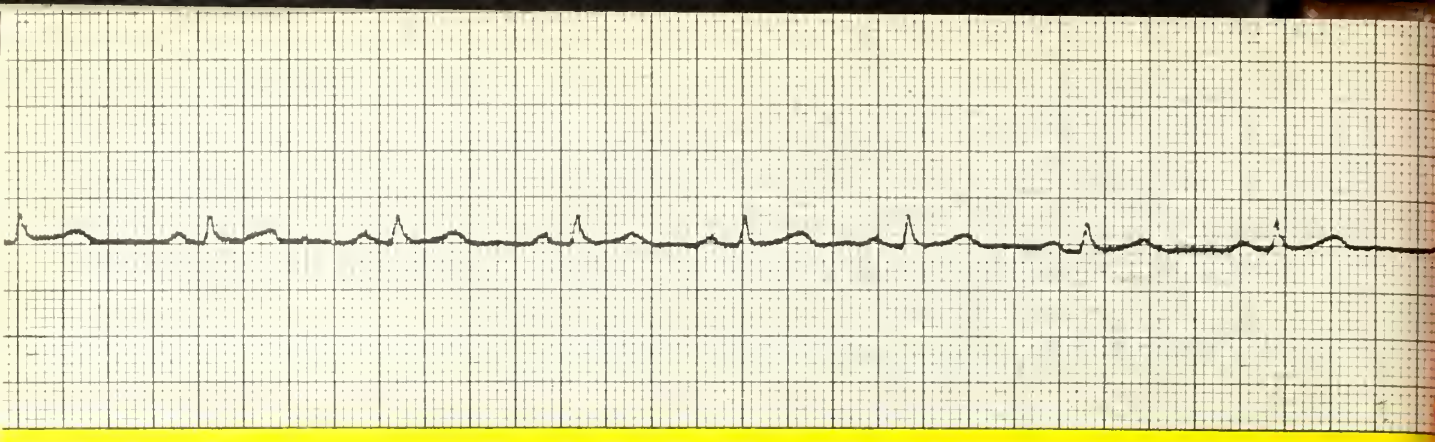
SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

In 1852 Alabama physicians believed malaria was caused by the State's heat, moisture and "superabundant" vegetation. They called upon planters to establish drainage systems and clear wilderness areas.

BLUE CROSS-BLUE SHIELD OF ALABAMA



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors, psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation: acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

JOURNAL of the Medical Association of the State of ALABAMA

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA • 1873 •

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
FEB 1971

IN THIS ISSUE

Common Misconceptions in Inhalation Therapy 439

Planned Parenthood 40 Years in Alabama 451

DISPLAY SLEEVES

Francis A. Countway Lib. of Medicine
10 Shattuck St.
Boston, Massachusetts 02115

JANUARY 1971

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

His wife has a lot of different
enopausal symptoms, but only a few
ally irritate *him*. Her hot flashes, her
rtigo, her palpitations—that's *her*
oblem. What really bothers him is
er nervousness, her irritability and
er excessive anxiety, often expressed
endless "book-shuffling, chain-
noking, reading-lamp" insomnia!
Menrium takes care of hot flashes,
rtigo, palpitations in most
enopausal women. Menrium
ovides the well-known antianxiety
tion of chlordiazepoxide (Librium®)
d water-soluble esterified estrogens.
therefore relieves more symptoms
an either component separately.
takes care of the vasomotor
mptoms as well as the emotional
mptoms. This means the symptoms
at bother his wife most. And the
mptoms that irritate him most.
So, to help them both get through
r menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • January, 1971 • No. 7

Office of Publication
19 So. Jackson St. .... Montgomery, Ala. 36104
Subscription Price ..... $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. ..... Montgomery

Managing Editor
L. P. Patterson ..... Montgomery

Assistant Managing Editor
Mary Nell Williford ..... Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman .. Montgomery
C. Kermit Pitt, M. D. ..... Decatur
H. H. Hutchinson, M. D. ..... Montgomery
William L. Smith, M. D. ..... Montgomery
L. P. Patterson ..... Montgomery

Officers of the Association

President
S. Buford Word, M. D. ..... Birmingham

Acting President
O. Emfinger, M. D. ..... Union Springs

President-Elect
A. E. Thomas, M. D. ..... Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. ..... Brewton
J. E. Cameron, M. D. ..... Alexander City
Wood S. Herren, M. D. ..... Birmingham

Secretary-Treasurer
William L. Smith, M. D. ..... Montgomery

Executive Director
L. P. Patterson ..... Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. ..... Decatur
J. P. Collier, M. D. ..... Tuscaloosa
Paul W. Burleson, M. D. ..... Birmingham
L. L. Hill, M. D. ..... Montgomery
M. Vaun Adams, M. D. ..... Mobile
J. D. Bush, M. D. ..... Gadsden
E. L. Strandell, M. D. ..... Brewton
John W. Davis, Jr., M. D. ..... Montgomery
J. Garber Galbraith, M. D. ..... Birmingham
H. G. Hodo, M. D. ..... Fayette

State Health Officer
Ira L. Myers, M. D. ..... Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1971
Delegate—M. Vaun Adams, M. D. ..... Mobile
Alternate—E. L. McCafferty, Jr., M. D. .... Mobile
Delegate—P. W. Burleson, M. D. ..... Birmingham
Alternate—Robert Parker, M. D. ..... Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. .. Fairfield
Alternate—W. E. White ..... Anniston

CONTENTS

President's Page 424

The Woman's Auxiliary 426

Editorial Comment 430

FDA Goes Drug Hunting and Bags 369 430

A Caduceus On The Lip Of A Moon Crater? 432

Guest Editorial—Diabetes Mellitus, A Threat To Many Alabamians 432

Scientific Section 439

Common Misconceptions In Inhalation Therapy, D. S. Tysinger, Jr., M. D., Dothan, Alabama 439

Legal Page 446

Association Forum 451

Planned Parenthood 40 Years In Alabama, O. Thomas Bolding, M. D., and Lee F. Turlington, M. D. 451

The Month in Washington 456

Around the State 462

Vital Statistics 462

Prominent Montgomerian, 50-Year Club Member Dies 467

Escambia Nominates Phillippi for MASA President-Elect 471

Fathers and Sons in Medicine 472

This Story Begins In Covered-Wagon Days 472

Hobbies to Fill a Doctor's Leisure 478

Quarter Horses Crowd the Murchison Stables 478

Alabama Department of Public Health .. 479

Syphilis—1957 to 1970 479

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

You know diuretics medically.

Hygroton® chlorthalidone USP

Makes water, not waves.

olyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of , if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

ton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* sensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which l be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and ation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium ments immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and g mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result l or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of earing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be ed cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. e dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic ination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte nce, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and ium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in ts receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, ia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic nsion, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, bocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and atitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of unds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other *ow Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please complete prescribing information.*

Y Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

President's Page

Does The American Medical Association Represent You?

O. Emfinger, M. D.

As far as I am concerned the answer to the above question is a resounding yes. As I returned from the AMA Clinical Convention in Boston I did considerable reflecting on just what I had seen and heard at that meeting in the various reference committees and in the House of Delegates in their business sessions. Of course it would be impossible in limited space and time to more than simply, very lightly, brush the surface of what transpired at that convention.

The formal actions of the House of Delegates will become available to membership through various and sundry methods during the months succeeding that meeting. The continued actions of various councils and committees will be made public as time goes on, but let me tell you here of some of the impressions I had of this meeting.

My first impression was one of utter confusion as to what went on and where it went on. However, as I quickly familiarized myself with the working of the various reference committees, and as I listened to the deliberations of the reference committee to which I was assigned as an observer, I was amazed at the tremendous amount of work which had preceded the actual meetings of these reference committees.

The data presented, the recommendations made, the decisions arrived at, all indicated not only a great deal of time and work, but a great deal of dedication both to the principles of the private practice of medicine in this country and the determination to give to the people of this country the best medical care possible.

One of the high points of the meeting was certainly the address by Dr. Bornemeier, President of the American Medical Association. He continued his policy, as he has since his inauguration in June, of proposing changes in the premedical, medical education and post graduate training, to streamline and shorten the length of training without sacrificing quality. Many comments were heard as to the forthrightness of this speech.

Certainly one of the biggest and most important topics at the Association was that which related to planning and ultimate final delivery of health care. This included methods, cost, peer review, etc. There were certainly differences of opinion as to how these problems could be handled but there was unanimity of opinion that the American Medical Association must have the major voice in both planning and delivery of health care without undue control by third parties.

One problem which created considerable discussion and arrived at no conclusion was that of malpractice liability insurance. I was impressed with the similarities of the problems and frustrations of the AMA to the problems and frustrations of our own State Medical Association in this area.

I got the distinct impression that an all-out effort was to be made to impress on our legislative branch of the Federal government that the American Medical Association represented the majority of physicians in the United States and in reality is the spokesman for these physicians.

Frequently we see in print or hear that the AMA really does not represent the physicians of America. It is true that a very large percentage of physicians in the United States do not belong to the American Medical Association. Some have never belonged, many have dropped their membership because of disagreement with certain policies of the AMA.

Of those physicians that I know personally who do not hold membership in the American Medical Association, I do not know of a single one that has a greatly different philosophy as to the delivery of health care from that of the American Medical Association.

There has been a time in the past when individual physicians or small groups of physicians could function effectively without being a part of what is called organized medicine. That day is past. The American Medical Association certainly needs every physician in the United States on its membership rolls. Conversely, every physician in the United States needs the American Medical Association. There is strength in numbers and certainly strength is what we need at this time if we are to preserve the private practice of medicine in this country as we know it.

Actually, we have already lost a great deal to bureaucracy in the government, but by concerted effort of a strong AMA we can hopefully salvage a type of medical practice with which we can live satisfactorily.

Yes, the AMA represents me. It also represents you. I pay my annual dues to the American Medical Association so it can represent me. I hope you do the same thing rather than taking a "free ride."

O. Emfinger, M.D.

O. Emfinger, M. D.
Acting President
The Medical Association
of the State of Alabama

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

one capsule for the rest of the night

Noludar® 300
(methyprylon)

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

HAPPY NEW YEAR!

The beginning of this new year marks the half way point in our Auxiliary year. We must evaluate the work done thus far, and rededicate ourselves to the completion of our goals.

It would be impossible to list, even by committee titles, the many ways County Auxiliaries are serving their communities. As I have traveled throughout the state visiting these Auxiliaries, I have been thrilled by the tremendous amount of enthusiasm displayed, and almost appalled by the ingenuity of all in their new and varied approaches to the solutions to old, demonstrated community health needs.

This new year also brings to mind RESOLUTIONS to be made. There is one that tops my list—one that I hope you will join me in making: Let us, the Medical Association and the Auxiliary, be true working partners, let us improve *whatever* needs improving, let us continue our friendly communication, yet let us ask for constructive criticism so that by this year's end, we can truthfully say that through our combined efforts, Medicine in Alabama, dedicated to the service of mankind, has retained the deserved respect of *every* layman!

Camille Johnson

Mrs. Howard C. Johnson

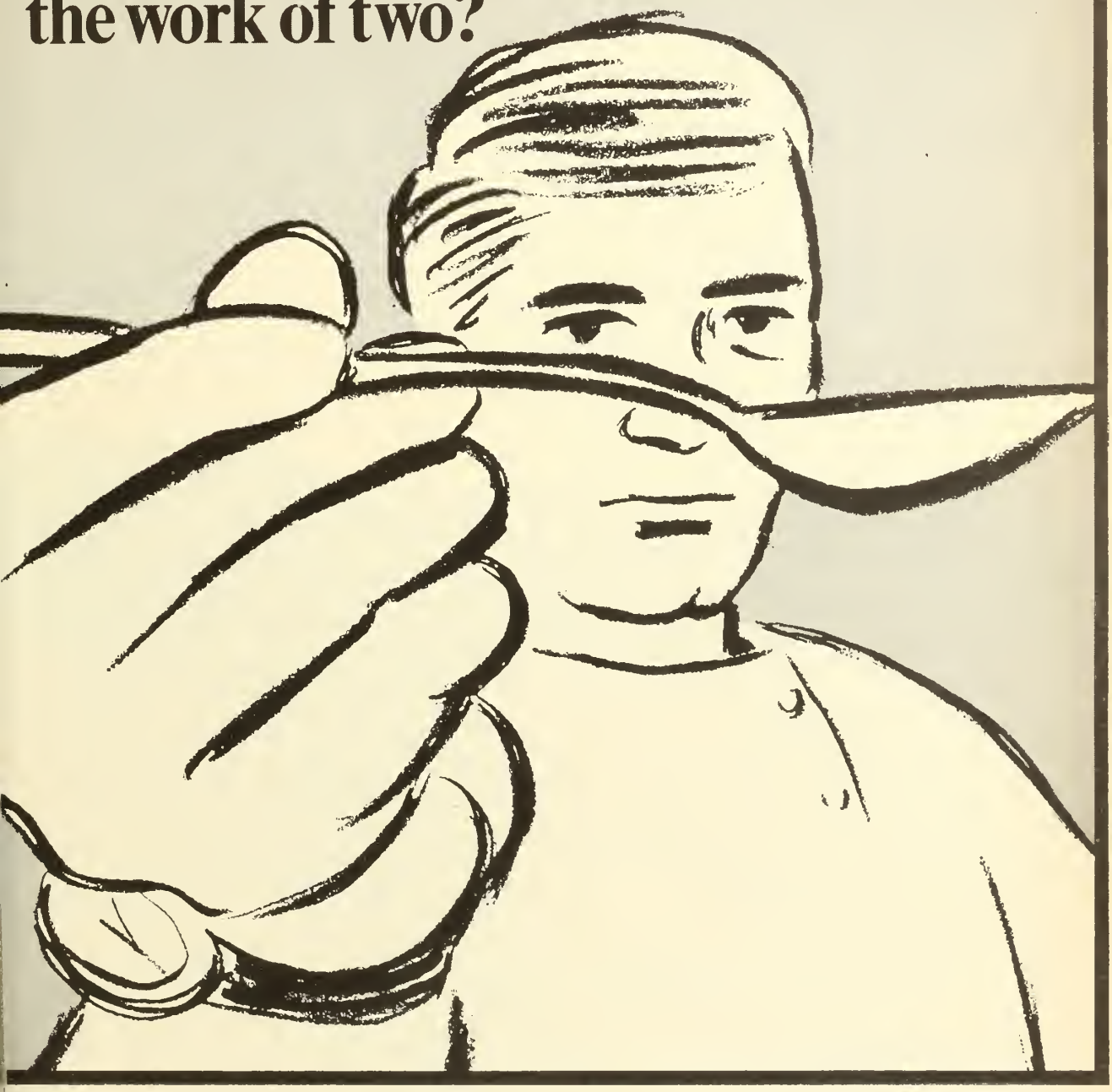
It has been suggested that historians may refer to the present age as the Age of Chiselry.

—Maxwell Droke

Heat, Ma'am! It was so dreadful here that I found there was nothing left for it but to take off my flesh and sit in my bones.

—Sidney Smith

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain aluminum hydroxide/magnesium hydroxide, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Efudex®
(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses–
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completely. Residual mild erythema remains in some areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N J 07110

An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

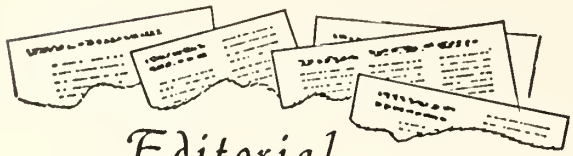
Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

new
Efudex®
(fluorouracil)
cream/solution



Editorial COMMENT

FDA Goes Drug Hunting And Bags 369

It is nice, having the Food and Drug Administration peeking under the drawn shades of p h a r m a c e u t i c a l houses and over the shoulders of doctors as they write their prescriptions. It is nice having this federal agency double-checking the medicines going down the throats or injected into the veins of ailing Americans.

But it can be embarrassing, confusing and, where the welfare of the patient is concerned, downright damaging.

Like on the rifle range, where one gets two "snapping in" shots to adjust the sight-leaf for windage and elevation before zeroing-in on the target, FDA took two trial steps forward before opening up with every gun in the battery.

The first FDA bullet clipped one side of the target—and cyclamates fell, mortally wounded. Medicine and pharmaceuticals were affected, but it was the soft-drink industry that got the message most directly.

The second FDA bullet struck in the four-ring, on the other side of the target, too close for comfort to pharmaceutical houses and medicine alike. And as before, the news media spread the word. A widely used oral hypoglycemic agent was causing excess deaths among diabetics. The phones of American doctors rang off the hook, as the saying is. Patients can read too!

The St. Louis meeting of the American Diabetes Association was watched by doctors all over the country, and attention centered on the words of ADA President Robert Hardin, praising the study but discounting its applicability "to clinical practice at this time."

To quote from Medical World News: "Doctors . . . were left confused and worried. One got up near the end of the discussion period and said, 'When I go home, I have no idea what to tell my patients on oral diabetic agents, who have all read newspaper stories implying that tolbutamide is useless or dangerous.' "

That too proved only a snapping-in shot. The FDA gun roared a third time, neatly coring the entire bullseye from the target, pasting a skull-and-crossbones on no less than 369 drugs, labeling them "either ineffective or unduly hazardous."

It's been a nice year on the rifle range.—M.

(Continued on Page 432)

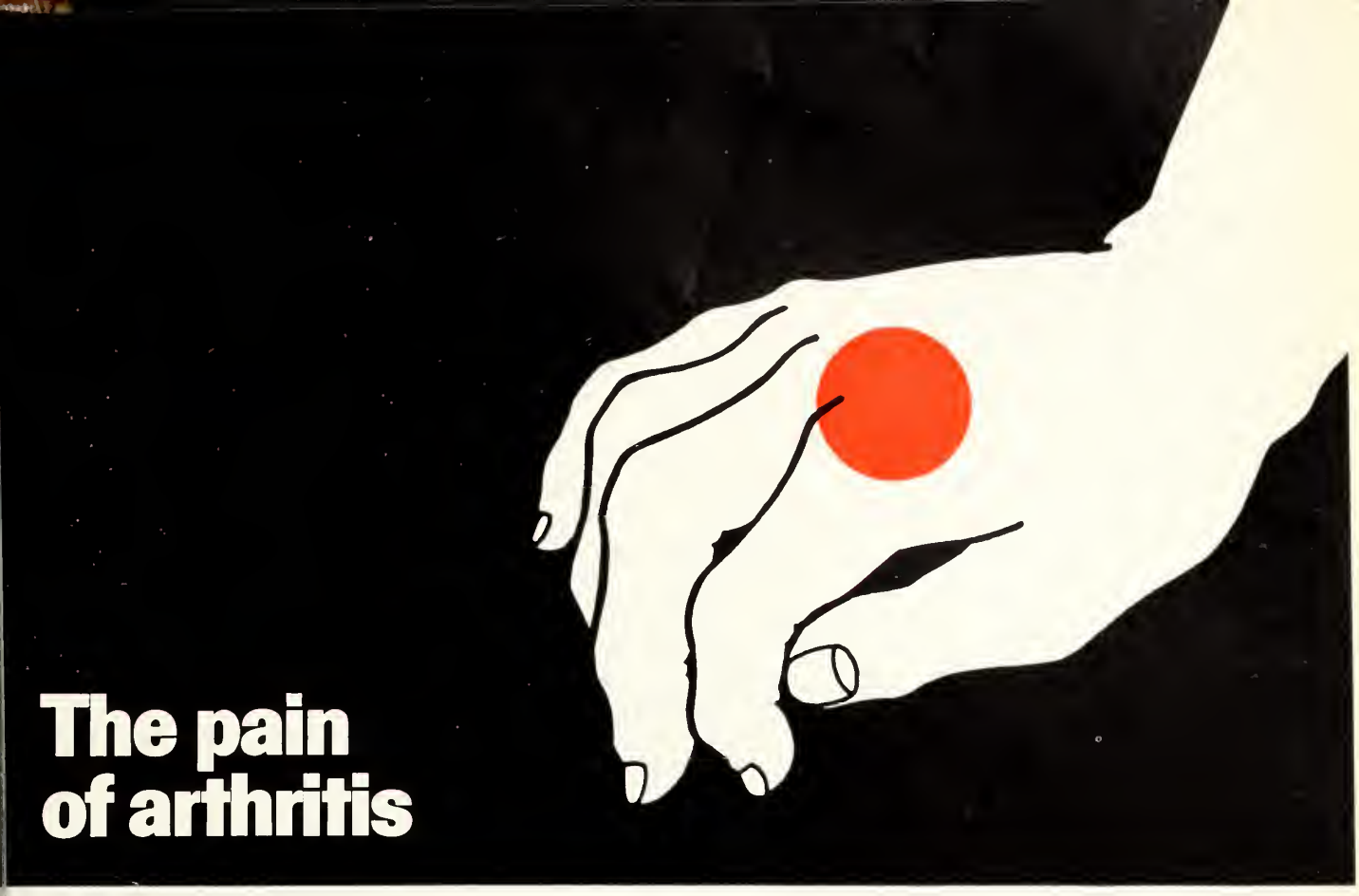
Obesity

The general creased a little in the middle to signify he was bowing.—Negley Farson

---

You like not anything new unless you be yourself the author thereof.

—Sumner, Lincoln's cabinet



relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

(Continued from Page 430)

A Caduceus On The Lip Of A Moon Crater?

Kilroy Was Here! The gagline inspired many a cartoon in World War II.

Less than a month from today, if the plans of man don't "gang a-gley," a team of two Americans will be strolling the hilly uplands of the moon.

On the rim of the Fra Mauro crater, they will be seeking materials dredged up from the heart of the moon five billion years ago and presumably left undisturbed by such erosion as our earthly weather brings to the landscape around us. An impacting smaller moon is supposed to have squirted it to the surface.

There'll be no Kilroy signs painted on the rugged rocks surrounding the astronauts as they explore the lip of the crater early in February. But where space is concerned, and before the first man was projected into the thin outer envelope of earth in a rocket's nose-cone, Medicine was there!

Fourteen years ago a Montgomerian, Woodford Agee Heflin, Ph.D., bylined a reference work that has since become classic, titled "The United States Air Force Dictionary." A two-paragraph entry defines "Space Medicine" as:

"A branch of medicine concerned with the study, prevention, cure, or alleviation of illnesses or diseases that are expected to arise from space flight.

"Space medicine deals with the effects or probable effects on the human body of conditions such as t r e m e n d o u s accelerations, weightlessness, cosmic radiation, etc."

The School of Aviation Medicine, which later became the School of Aerospace Medicine, was first organized in 1949 under the direction of the Air University, later becoming a part of the Air Training Command, and is now under the Systems Command, headquartered at Brooks AFB, San Antonio.

So, next month, under the searing direct rays of a noonday sun, our moon adventurers will see no Kilroy signs around, but among their mirages one might very aptly read:

"Medicine Was Here!"

GUEST EDITORIAL

Diabetes Mellitus, A Threat To Many Alabamians

Diabetes mellitus involves approximately five per cent of the population; furthermore, it is estimated that 25 per cent of the population are carriers of diabetes. Unfortunately, less than half those patients who have diabetes are aware of the fact. As a result of this serious complications of diabetes have occurred many times prior to the diagnosis being made. Certainly, a two-hour post prandial blood sugar as a screening procedure should be performed in every individual during their annual check-up. If the two hour post-prandial blood sugar is higher than 120, performed on whole blood by true glucose methods, or more than 136 performed on serum or plasma; the individual should have a glucose tolerance test. Certainly, just using the urine test for screening will miss a large portion of the individuals with diabetes.

The glucose tolerance test should be performed in the morning with the patient at least ten to 12 hours post prandial. The patient should have consumed a diet of at least 150 grams of carbohydrate a day for the three days preceding the test. In addition, the patient should not be taking drugs, such as thiazides, oral contraceptives, oral hypoglycemic agents, laxatives, etc., which are known to interfere with carbohydrate metab-

(Continued on Page 435)

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libida, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indicotions:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriasclerosis and static foot deformities. **Contraindicotions:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precoutions/Adverse Reoctions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

0915A 1/70

(Continued from Page 432)

olism. The patient should not just be getting over a serious emotional stress, or illness, such as pneumonia or myocardial infarction. One should wait at least a month following a major illness prior to doing a glucose tolerance test for diagnostic purposes. The glucose tolerance test should be performed in the morning hours between 8:00 a.m. and 12:00 Noon. The patient should be resting comfortably during the test and not exercising actively. Furthermore, the patient should not smoke nor drink coffee during the test. Nicotine and Caffeine can both cause the test to be abnormal. Excessive exercise while the test is going on can normalize the test, which would otherwise be abnormal. Seventy-five grams of glucose in a three to five hundred cc. of cool water, flavored a bit with lemon, should be consumed by the patient over about a five minute period. Samples for glucose should be checked just prior to administration of the glucose, and then every 30 minutes for at least three hours. If glucose determinations are performed on whole blood, the blood sugar should not go higher than 160 during the first hour, and should be less than 120 at the end of two hours in order to be classified as normal. If serum is used, the values are normally about 15 per cent higher than those on whole blood. The Hoffman ferricyanide technique on the auto-analyzer corresponds quite closely to the Smoygi-Nelson technique.

Folin-Wu procedures are certainly antiquated at this point and should not be used.

When the diagnosis of diabetes is made, the individual should be instructed on a diabetic diet, calculated to help them reach their ideal body weight. Generally speaking, about 30 calories per kilogram per day is essential for maintenance of weight in relatively sedentary people. If one desires weight loss, the diet should be reduced to 20 to 25 calories per kilogram of ideal body weight, whereas, if an individual desires to stimulate weight gain, 35 to 45 calories per kilogram of ideal weight should be used. It is not adequate to just hand the patient a diet and say follow this diet, it has been our policy to offer at least a one week instruction course for all new diabetic patients, during which there is a major emphasis on the dietary treatment.

Diabetes is the most common cause of irreversible blindness and is by far and away the most common metabolic condition predisposing to accelerated vascular disease, involving the eye, the brain, the heart, the kidney, and the peripheral vessels. Although. there is not conclusive proof, there is more and more evidence accumulating to suggest that early detection and good treatment can delay and perhaps prevent some of the complications. As a matter of fact, in individuals under the age of 50 years, found to have coronary artery disease, two thirds have been found to have diabetes mellitus. Approximately 40 per cent of the patients entering the University Hospital with strokes who have been checked have been found to have diabetes, and the majority of individuals coming in with peripheral gangrene have diabetes mellitus. It has been estimated that one diabetic foot ulcer costs the economy $5,000 in loss of work and medical care. Most of the diabetic foot ulcers are actually preventable.

The results of the University Group Diabetes Program which have failed to demonstrate a beneficial effect of oral hypoglycemic agents, and insulin as routinely used, in preventing the long-term diabetic complications. suggest that we need to totally re-assess our approach to the treatment of diabetes. There is now good physiologic information to suggest that hyperglycemia can stimulate glucose over the so-called "Polyol" pathway, resulting in cataracts and perhaps other conditions, including vascular disease.

In the period between 1922 and 1936 regular insulin was the only insulin available for the treatment of diabetes. Today, it would appear that a careful study would be in order to evaluate the use of regular insulin which will normalize the one and two hour post prandial blood sugars, something that can-

not be done by oral hypoglycemic agents or intermediate acting insulin.

In any case, however, diabetes is easily detected, treatment is not particularly difficult, nor is it expensive. Certainly, at least some of the complications can be prevented by early diagnosis, and adequate treatment. I would like to again re-emphasize the importance of the two hour post prandial blood sugar as a screening, and the glucose tolerance test as the ultimate test for diagnosis. It is also important to emphasize that whole blood sugar is about 15 per cent less than that of plasma and serum, and furthermore, that capillary blood sugar is higher than venous blood sugar. Therefore, one should be aware of these facts in interpreting blood glucose values.

—Buris R. Boshell, M. D.
Director
Division of Diabetes
University of Alabama
School of Medicine

WANTED:

GENERAL PRACTITIONER—
INTERNIST

A delightful, progressive Southern community of 6,000, with a service population of 15,000, offers excellent recreational facilities, located 75 miles from Florida's "MIRACLE STRIP" on the Gulf of Mexico. Currently three physicians, greatly overloaded. Modern Hill-Burton Hospital with new addition opened September 14, 1970. Ample beds. Assistance to make easy transition.

Write or call Lowell S. Benton, Administrator, Elba General Hospital, Elba, Alabama. Telephone (205) 897-2257.

Brief Summary of Prescribing Information—9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

Not too little, not too much... but just right!

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone® Liquid 250

Erythromycin Estolate

(equivalent to 250 mg. of base per 5-ml. teaspoonful)

Additional information available to the profession on request
Eli Lilly and Company
Indianapolis, Indiana 46206

Lilly

100204

THE JOURNAL
of
THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
Published Under the Auspices of the Board of Censors

Volume 40 January, 1971 Number 7

Common Misconceptions In Inhalation Therapy

By D. S. Tysinger, Jr., M. D.

Dothan, Alabama

In medicine, as in all professions, there are (1) those who desire to be great, (2) those who desire to be rich, (3) those who desire to be liked, and (4) those who desire to find out—the curious. In history, when the fact that the world was round was realized by those who desired to find out, it was immediately ridiculed by those who desired to be great and whose greatness depended on a square world. (There are still a few around). Their denunciations were supported by those who desired to be rich and who made their wealth off of these false premises. Since these two were the majority, those who desired to be liked supported the falsehoods and the truth was slow in arising on the scientific scene.

The laws of Nature were not man-made and cannot be man-changed. The routines of treatment change as the relative state of ignorance changes. The laws of physics and chemistry are unchanging and should be understood and worked with for the best results.

In inhalation therapy much has been said and done that is better than nothing at all, but which is not physiologically correct and therefore, not very good. Such therapy has been perpetuated by those who would be great and their supporters (group 2 and 3) at the expense of, and to the detriment of, the science of inhalation therapy. This has, and is, holding back progress in scientific inhalation therapy and is causing confusion because the results are poor and mediocre though still better than nothing.

In no other branch of medicine is a thorough knowledge of the gas laws, physics, and basic chemistry so important and so directly applied.

Presented herein will be a simplified, presentation of water vapor and particulate, gases, and pressures as they apply to inhalation therapy. Ideas may change but the facts and laws herein presented cannot. Work with them and get good results. Try to deny that they exist and get mediocre or no results.

The reader would greatly profit from making a complete copy of the following laws and keeping them handy as he studies here. Try to go over the gas laws and visualize all of the places they are controlling what is done in inhalation therapy. A list should include (1) Charles' Law (2) Boyle's Law (3) Gay-Lussac's Law (4) Dalton's Law (5) Graham's Law (6) Pascal's law (7) Ficks Law (8) Henry's Law (9) Stokes' Law (10) The physiologist law of Laplace (11) Archimedes Principle (12) All of Newton's Laws (13) Poiseuille's Formula (14) Bernoulli Principle (15) van der Wall's Law (16) Avogadro's Law.

PART I
HUMIDITY

The inhalation therapist deals with water in two simple forms. No matter how compli-

cated he would like to make the subject for show, this fact is not changed. First is water vapor which is humidity. Second is particulate water which is produced by one means or another.

This section will deal with humidity. Humidity is water vapor. Matter is divided into solid and fluid. Fluid is divided into liquid and gas. Gas is divided into true gas and vapor. In this section we will deal with the vapor.

It is first necessary to understand a few of the basic facts about matter before proceeding to gases and vapors. All matter is made up of atoms or molecules. These atoms or molecules are in constant motion (kinetic energy). This constant motion can be demonstrated by putting water with very small iron filings under a microscope and watching the constant motion of the filings (Brownian movement). This is caused by the impact of the water molecules on the iron filings.

The state of matter—solid, liquid, or gas—depends on the speed of the atoms or molecules and their average distance apart. (The mean free path) The rate at which they move depends on the temperature. Heat causes the atoms or molecules to move faster and the mean free path to get larger. As the mean free path increases to 300 molecular widths and above then the substance exists as a gas or vapor. As matter is cooled energy is removed, the mean free path shortened, kinetic energy slows. At absolute zero-273 degrees C. kinetic energy is 0, or no energy theoretically exists, and molecules are still.

For matter there is a temperature above which it exists as a gas (that is no matter what the pressure applied the substance remains as a gas). This is known as the critical temperature for the substance. The critical temperature for air is -140°C. The critical temperature for water is +374°C. The difference between a vapor and a gas is that a true gas exists atmospherically above its critical temperature and is not liquifiable. A free atmospheric vapor exists below its critical temperature and thus can easily be changed from liquid to gas with relatively small changes in temperature and/or pressure. Atmospheric water exists as a vapor. Oxygen and nitrogen exist as a gas.

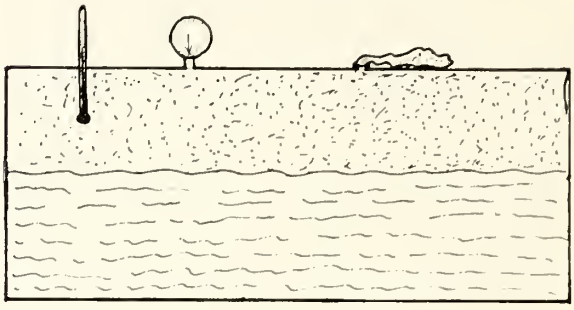


Figure 1

If water and air are put in a closed container, with a relief area as in Figure I at a given temperature and pressure, the kinetic energy of the water molecules causes these molecules to escape into the air over it. As this occurs, air molecules are infiltrated by water molecules so that there is no change in the temperature or pressure of the gas. As more and more water molecules escape into the air and totally fill all available infiltration spaces, then some water molecules will begin to return to the water. If left alone long enough an equilibrium state will be reached at which the number of water molecules entering the air equal the number of water molecules returning to the water. At this point the air is saturated for this particular temperature and pressure. The amount of water in the vapor state is dependent on the kinetic energy which is dependent on the temperature. Gaseous water is a vapor and thus is spoken of as water vapor pressure.

Water vapor, being a gas, changes density and volume as temperature changes. As the gas is heated by any means then the heat is added to the molecules as increased kinetic energy. The molecules get farther apart (mean free path is increased). This means that a unit space filled with this gas at the higher temperature will contain fewer molecules due to the above, which means that the gas is less dense. With the kinetic energy being increased the molecules travel faster

		I	II	III	IV	V
Temperature °C	Temperature °F	cc water vapor & cc of water will make	cc of water in one liter of water vapor	water vapor pressure	% of water vapor in air 100% relative humidified 760 mmHg.	cc of water per liter of air 100% relative humidified 760 mmHg.
0	32	1275 cc	0.780 cc	4.6 mmHg.	0.61 %	0.0048 cc
25	75	1382 cc	0.722 cc	23.8 mmHg.	3.14 %	0.023 cc
37	98.6	1400 cc	0.714 cc	47 mmHg.	6.2 %	0.044 cc
87	190	1681 cc	0.595 cc.	468.7 mmHg.	61.7%	0.367 cc
100	212	1742 cc	0.574 cc	760 mmHg.	100 %	0.574 cc

This table derived from standard vapor pressure, temperature and density, AND coefficient of expansions tables

TABLE # 1

and thus the impact against the walls of the container will be greater and, with a greater number of impacts, the pressure is likewise increased.

Returning to the air-water container at a higher temperature, Figure No. 1, it is found that, with the higher kinetic energy due to the temperature increase, more water molecules escape at a faster rate. Thus, the saturation point is reached faster and at this point more water molecules are contained in the air above the water. Since more water molecules are contained at a higher kinetic energy the partial pressure due to water vapor is a greater amount of the total than it was at the lower temperature. (Kinetic theory, Newton's Laws, Charles', Boyles' and Gay-Lussac's Laws, etc.)

Water vapor is water as a gas. As gases get less dense due to expansion on heating so does water vapor. The simplest way to represent this is to give the amount of water vapor one cc of water will make at various temperatures. (Table I, Column I). At 0°C. (32°F) one cc. of water will make 1,275 cc. water vapor. At 37°C. (98.6°F) body temperature one cc. of water will make 1,400 cc. of water vapor. At room temperature 25°C. (75°F.) one cc. of water will make 1,382 cc. water vapor. At 87°C. (190°F.—the temperature at which most "hot pots" run) one cc. of water will make 1,680 cc. water vapor. At 100°C. (212°F.), the boiling point, one cc of water will make 1,742 cc. water vapor. To look at this same thing a little differently (Column II, Table I) one liter of water vapor at 0°C. (32°F.) would contain 0.780 cc. water. At 25°C. (75°F.) one liter of water vapor would contain 0.722 cc. water. At 37°C. (98.6°F.), one liter of water vapor would contain 0.714 cc. water. At 87°C. (190°F.), one liter water vapor would contain 0.595 cc. water, at the boiling point, 100°C (212°F.), one liter of water vapor would contain 0.574 cc. water.

It was learned earlier, however, that at total saturation at any temperature the amount of water vapor was only a part of the total. Since this is expressed as water vapor pressure then it is necessary to know the water vapor pressure in order to find out what amount of water vapor will be present in the air. From water vapor pressure tables it is found that, when air contains all the water vapor it can at a specific temperature, it is expressed as a pressure. (Table I, Column III) At 0°C. (32°F.) water vapor pressure is 4.6 mmHg. At 25°C. (75°F.) water vapor pressure is 23.8 mmHg. At 37°C.

(98.6°F.) water vapor pressure is 47 mmHg. At 87°C. (190°F.) water vapor is 468.7 mmHg. At 100°C. (212°F.) water vapor pressure is 760 mmHg. Remembering Dalton's law of partial pressure then water vapor pressure is a proportion or per cent of total barometric pressure. This will give the amount of water for 100 per cent relative humidity (the water air will hold) at any given temperature. Thus 100 per cent relative humidity will be at 760 mmHg. barometric pressure; (Table I, Column IV). At 0°C, 100 per cent saturation will be 0.61 per cent water vapor. At 25°C. (75°F.) 100 per cent saturation will be 3.4 per cent water vapor. At 37°C (98.6°F) 100 per cent saturation will be 6.2 per cent water vapor. At 87°C. (190°F) 100 per cent saturation will be 61.7 per cent water vapor. At 100°C. (212°F.) 100 per cent saturation will be 100 per cent water vapor. Finally, since 100 per cent relative humidity is a portion of water vapor, which also gets less dense with increases in temperature, it can be determined that, per liter of air at 760 mmHg. barometric pressure, 100 per cent relative humidity would contain at 0°C. (32°F.) 0.0048 cc water; at 28°C. (75°F.) 0.023 cc. water; at 37°C (98.6°F.) 0.044 cc. water; at 87°C (190°F.), 0.367 cc. water; at 100°C. (212°F.), 0.57 cc. (See Table I, Col. V)

Humidity, then is the amount of water that air will hold at any given temperature. The amount of water vapor the air actually has at any given time expressed as a per cent of the total amount it will hold is spoken of as Relative Humidity. For instance, 100 per cent relative humidity at room temperature (25°C, 75°F) is 0.023cc/L of air, which is a pressure of 23.8 mmHg. or 3.14 per cent of total barometric pressure if it is 760 mmHg. At body temperature it takes 0.0443 cc. of water/L to make 100 per cent relative humidity, which is 47 mmHg. pressure, or 6.2 per cent at the total barometric pressure at 760 mmHg. Now, assuming 760 mmHg barometric pressure at 25°C (75°F) room air, if the air contains 0.0115 cc. water/L of air it has a relative humidity of 50 per cent. If we use some device that improves this by 25 per cent (increases the relative humidity of room air by 25 per cent), then it must add 0.0055 cc/L of air which increases the 0.00115 cc of water/L at 50 per cent relative humidity to 0.0175 cc. water/L of air. To put it another way at 50 per cent relative humidity at room temperature, air contains 0.0115 cc. of water/L. To increase it to 100 per cent relative humidity another 0.0115 cc. of water/L of air must be added. This amount that must be added is known as humidity deficit.

The human being breathes room air. The air must be 100 per cent relative humidity at body temperature when it gets into the lower airway. If then this individual is breathing room air with 100 per cent relative humidity, which contains 0.023 cc/L of air, when it gets to the lower level of the lungs it must have added 0.0210 cc. of water/L to make it show 100 per cent relative humidity. If, in contrast, room air is only 50 per cent humidified then, instead of 0.0210 cc/L, 0.0265 cc/L of air must be added to make room air still show 100 per cent relative humidity at body temperature. This difference in the relative humidity of the air breathed and 100 per cent relative humidity at body temperature is known as physiological humidity deficit.

If an individual is breathing 6L/minutes of room air at 50 per cent relative humidity and at room temperature then this 6 liters of room air would contain 0.0690 cc of water. If it were 100 per cent humidified it would contain 0.1380 cc/6L of air. At 100 per cent relative humidity at body temperature 0.266 cc/6L of air are needed. If the 50 per cent relative humidity is supplying only 0.069 cc of water there is left a physiological humidity deficit of 0.197 cc for the 6 liters of room air. If the room air had been at 100 per cent relative humidity, the physiological humidity deficit would have been only 0.128 cc/6L, or a reduction in additional moisture requirement of 0.069 cc for the 6 liters of air. Now, if one of the "amazing" machines is used which increases this humidity of the room air by 25 per cent then 0.0055 cc per liter, or

0.033 cc/6L more, is added and the respiratory tract is saved this amount by the humidifier. This comes to almost 1.98 cc/hour or 47.52 cc in a 24 hour period. The patient can add more water than this by drinking water every hour and by breathing through the mouth!

Now, refer to Figure 1. When air and water were put together a relief valve was added. This was done in order that no pressure would be built up in the process and change the relation of pressure and temperature. This was not necessary. Can you determine why? As water molecules enter the air by molecular escape so do oxygen and nitrogen molecules enter the water. If this didn't occur and water vapor got into the air plus the air that is already present then it would cause an increase in gas pressure (Dalton's Law of Partial Pressures). This would occur because the water volume is not decreased as much as the increase in water vapor volume and pressure, thus the pressure above the liquid would go up. Why is this so important anyway? Ask any pilot. It has already been pointed out that cold air is more dense than hot air. The density of the air determines the ability of the air to carry particles, dust, rain, or airplanes. With heat, air gets less dense. At 0°C (32°F) it takes roughly 1/3 less runway to take off than it does at 37°C (98.6°F). To put it another way the air at freezing will carry 1/3 more than air at body temperature. In inhalation therapy the air is 100 per cent humidified. Air is made up of 21 per cent oxygen with a molecular weight of 32, and 79 per cent nitrogen with a molecular weight of 28. If five per cent of this air is taken away and water vapor is added in its place, the water, having 33 1/3 per cent oxygen at a molecular weight of 32 and 66 2/3 per cent hydrogen with molecular weight of two, is very much lighter than air. The air with the five per cent humidity added is less dense than the dry air at the same temperature. Thus cold dry air will carry more per unit volume than cold moist air. Cold moist air will carry more than hot dry air. Hot dry air will carry more than hot moist air. Again, inhalation therapy strives to deliver only moist air to the lungs.

It is hoped that by this time, the reader (1) has realized the extremely small amount of water involved in humidity, and (2) has realized that anything used to increase room humidity even to 100 per cent is futile in supplying water and preventing water loss from the lungs. It has been stated that nothing is feared more than spiders and that nothing deserves it less. Likewise, in inhalation therapy, nothing has been discussed more than humidity and nothing deserves it less.

If there is no visible spray over the nose and mouth, the air is not humidified. If the air is at 100 per cent relative humidity at body temperature a water surface area must be present in sufficient quantity to allow 100 per cent relative humidity to develop by molecular escape as temperature increases. This should be obvious since 100 per cent relative humidity at room temperature is only 50 per cent relative humidity at body temperature.

In Figure No. 2 is depicted the average humidifier with a plume of spray particles averaging 10-100 microns or better in size. The claims are fantastic for its ability to increase the humidity of a room. They do increase the humidity in a closed small room by an average of 25 per cent. If the patient's face is well in the spray of the plume (Diagram No. 2-B) the air to the lungs will be, by molecular escape, 100 per cent humidified. If the particles are too large to enter the airways they will rain out in the mouth but will provide sufficient surface area for molecular escape to maintain 100 per cent relative humidity. What do these humidifiers actually do then? The particles produced follow Stoke's Law and, due to their large size, succeed in making the floor wet and slippery for nurse, patient, and visitors. Smaller particles travel further and manage to make the bed wet. Unless they are dissipated by molecular escape they fall out following Stoke's

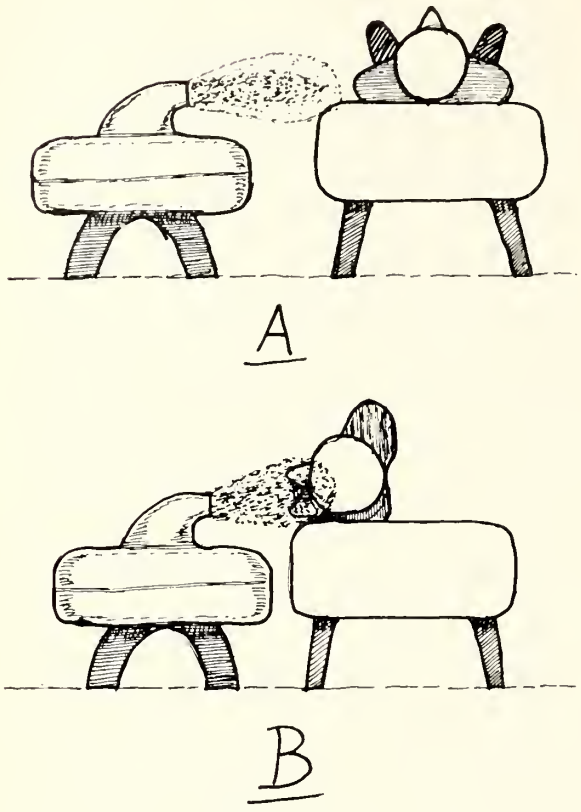


Figure 2

Law. In the process they do increase the relative humidity by 25-30 per cent. This makes the room seem more stuffy and uncomfortable to all present and is given as a sign of its effectiveness. If there are cool objects in the room, or if the temperature is cool enough outside, then dew will form on them. This involves the concept of dew point. The dew point is the temperature to which air must be reduced for the water content of the air to reach 100 per cent relative humidity and form dew on cooler objects. This is usually given as the second proof of the effectiveness of these water belchers.

The dew point is raised to a greater extent than is the increase in relative humidity. Increasing the relative humidity by 25 per cent increases the dew point much more. Moisture forms on the window if the outside temperature is below the dew point the same as for mirror, etc. In the air, clouds form by air temperature falling below the dew point as the air rises. For cloud droplets to start developing (cloud droplets are 1/10,000 of an inch—2.5 microns—in size) there must be even smaller dust particles, or particles called condensation nuclei, around which the droplets can form. The same is true in order for dew to form. However, the surface of the cold objects acts both as condensation nucleus and provides a colder surface for the water condensation.

Since cold air cannot contain enough water as humidity to produce 100 per cent relative humidity at body temperature, why not heat the water and air and produce 100 per cent relative humidity at a hot temperature? Then as the temperature cools to body temperature it will remain at 100 per cent relative humidity. Good idea! It works! Heat the water with a water nebulizer so that there is 100 per cent relative humidity 190°F-87°C. This is no problem. One thing must be done, however; the temperature must be kept above the body temperature until the water vapor reaches the mouth and nose. If it gets below body temperature it will not be 100 per cent humidified and the whole purpose is to keep it there. If the air is delivered to the upper airway above body temperature then it adds heat to the body that must be eliminated. (The lungs are organs of heat loss normally). In the individual who is running a fever this added heat load for the body can aggravate the febrile condition and cause increases in body temperature. If heated mist is to be used then it must (or should) reach the mouth at precise body temperature. (Too high a temperature is bad and too low is ineffective.) As this heated mist is produced the particles produced in it are somewhat cooler than the heat itself, though the fluid is heated up to 190°F (87°C). When the particles are nebulized the temperature of the particles drops about 20° (to about 154°F or 76°C). Temperature equilibrium is reached rapidly as the particles and air start through the tubing to the patient. (It takes much longer to warm water than air. The water particles take the brunt of the cooling.) Now, since all these particles are present and at a cooler temperature they act as the window in the patient's room. Since the temperature

and the dew point are the same and the particulate temperature is lower, dew begins to form on the water particles. The water particles grow larger. While this is occurring the walls of the tubing are also exposed to the room air which is very cold in relation to the hot air inside so that dew forms rapidly on the tubing wall in large amounts. Depending on the size tubing and the rate of air flow, Stoke's Law comes into play here, along with turbulence, and more water collects. Over one-half of the moisture and particulate water leaving the heated nebulizer rains out on the tube walls. This is no problem. If the tubing is kept lower than the patient so the water can drain back into the water container then this water does not run into the patient. This steady flow of water back to the low boiler, however, does cause more and more water to be removed from the air as it trickles back into the pot. It was mentioned previously that hot moist air carries much less than cold moist air. The number of particles hot moist air will carry is 1/3 to 1/2 the number cold moist air will carry. So, to start out from the hot pot, air is humidified but with particles being fewer per unit of air. (This air will not carry them). Due to dropping dew point water is lost to the tubing walls thus making the water particles larger. This along with turbulence and the effect of Stoke's Law causes "raining out" to occur much faster. This causes a marked reduction in water delivery though it will give 100 per cent relative humidity. The nebulizers that can be run hot or cold deliver 1/3 to 1/2 more water at the mouth run cold than when run hot. The particle size is determined cold and particles triple in size coming from 190°F to 98°F, these large particles do not get very far into the lungs. (This will be gone into further in the next of this series "Particulate Water").

As a conclusion of this portion on humidity it is to be remembered that, as sufficient water is nebulized past the nose, mouth, and/or tracheotomy, then it will be impossible to keep that air from being 100 per cent humidified at body temperature. Steamers, water belchers, etc. which raise relative humidity in the room air but which do not put sufficient particulate water into the nose and mouth are very close to being worthless. In support of the feeble claims of those who would argue that the laws of Nature herein presented are wrong and should be repealed, their conclusions are based on the assumption that something, though not the best, is better than nothing. The laws cannot be repealed and all will find, if they work with a full knowledge of them, that they will get much better results than with the halfway measures they now use.

Next To The Doctor

The next best thing to a doctor in the house is a book; that is, one particular book (according to the dust-jacket blurb) entitled "What To Do Until The Doctor Comes," bylined by Ian Hudson, M. D., and Gordon Thomas, and just published by Auerbach, 1101 States Road, Princeton, N. J. It carries a foreword by Trevor P. Mann, M. D.

Divided into four parts—"Immediate Emergencies," "Less Urgent Illnesses," "Non-urgent Illnesses" and "General Advice and Child Care"—this book ranges a wide field of medical crises from Artificial Respiration to Warts and Worms, from bruises, breath-holding and bleeding tooth sockets to virus fevers, vomiting, and vacations abroad.

It was interesting to compare this book of 285 pages with one of almost identical title, "What to do Till the Doctor Comes," published 27 years ago, in the midst of World War II, in 372 pages. The price tag has long since worn away from the old paperback, which has been carried in the glove compartment of our cars ever since. The price on the new book is $7.95.

If I were running the world, I would have it rain only between 2 and 5 a. m. Anyone who was out then ought to get wet.

—Wm. Lyon Phelps

Recovery From A Person Legally Bound To Provide Medical Services

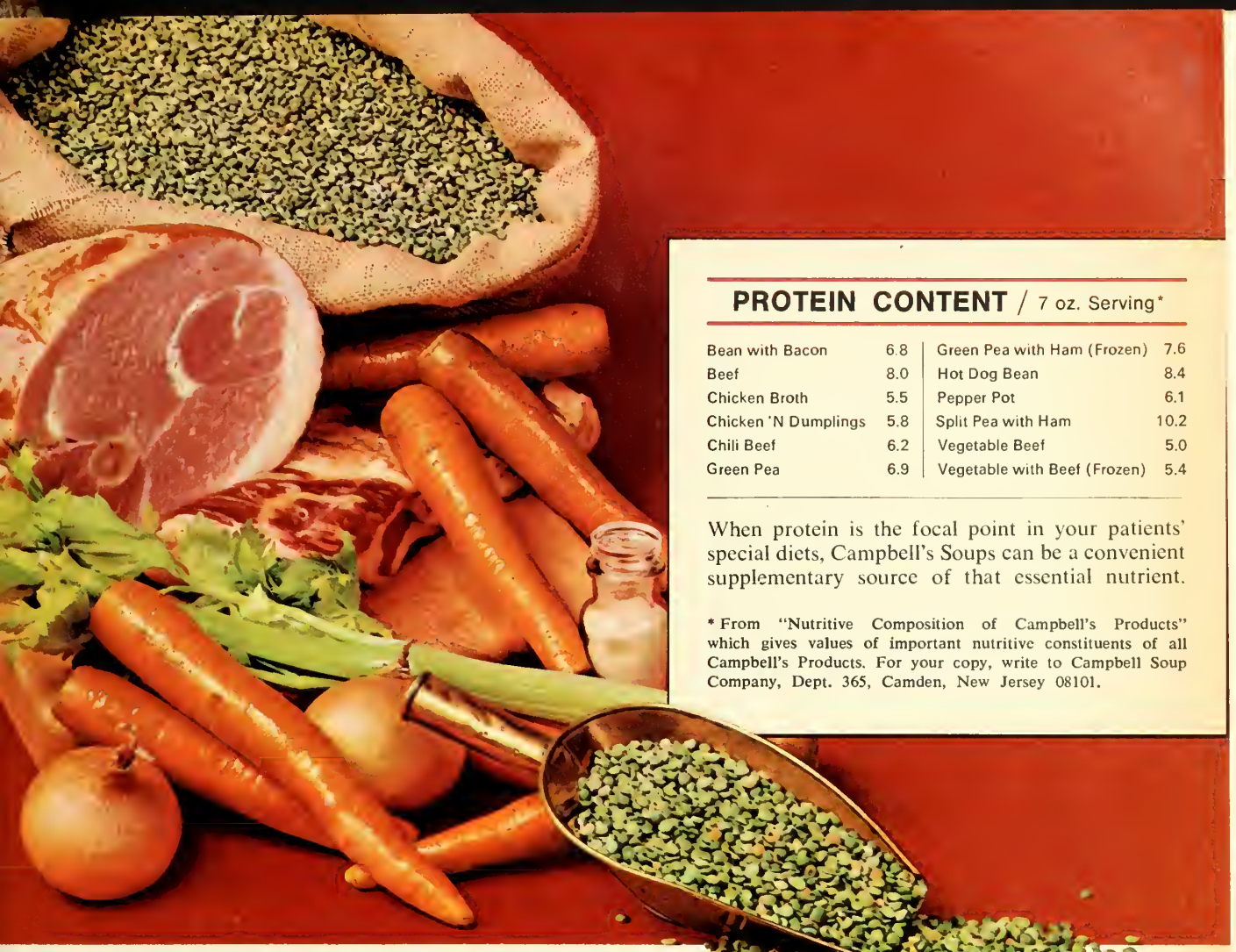
J. Douglas Evans,
Director Legal-Legislative Affairs

When the law imposes a duty on one person (example, a husband or parent) to provide for the necessary expenses of another, the law will imply a promise on the part of such person to pay for medical services furnished at his request to the wife or child. A husband is bound to supply his wife and minor children with the necessities of life, including medical care and attention. The same obligation applies to a widow or divorced woman who has legal custody of minor children. They may be held liable to pay for medical services rendered by a third person to a minor child without their request or consent where there is an omission of duty on their part to furnish medical care to the child. Also, if an emergency necessitates immediate medical attention without contacting the parents, the law will imply a promise on their part to pay a reasonable compensation for such services, for example, in the case of illness or injury at a distance from the parental home. *Osborne versus Weatherford* 27 Alabama app 258, 170 S. O. 95 (1936). These rules do not apply to medical services rendered to an adult child, and/or "emancipated" child who has voluntarily left the parental home and established his way in the world. A minor child is not "emancipated" merely because he is away from home; he must have left home for the purpose of seeking his own livelihood, independent of his parents, and be of sufficient age to remain out of school.

As a general rule, a parent is not obligated to pay for medical services furnished to an adult child; an adult child is not obligated to provide medical care to a parent; a grandparent is not obligated to provide medical care to a grandchild; and a parent is not required to furnish medical care to the spouse of a child. However, in certain cases a parent may be liable for medical care furnished to an adult child who is physically incapable of supporting himself, and an adult child may become responsible for medical services rendered to his parents, where he has taken the parent into his home and cared for him.

As a general rule, the law will not imply a promise to pay for medical services requested by a brother, sister, niece, etc., merely because of blood relationship with the patient. For liability to exist, there must be special circumstances showing an expressed contract, or warranting an implied contract, obligating the relative to pay for the medical services rendered.

$40,000 guaranteed first year. General practices in small scenic Alabama city. Maximum leisure time with family. Not an employment agency. No cost to physician. Sanford Smith, Director-Physician and Personnel Planning, P. O. Box 9836, Houston, Texas 77015. 713-453-6324.



PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

A distinctive combination containing 1 mg. of ethynodiol diacetate, Searle's unique progestin with an unmatched record of acceptance in oral contraception, and 50 mcg. of ethinyl estradiol. The same low incidence of breakthrough bleeding and of other side effects you have come to appreciate with ethynodiol diacetate and mestranol plus all the convenient dosage schedule and packaging features you expect from Searle. The choice is yours!

A fresh choice

in oral contraception

Demulen®

Each tablet contains 1 mg ethynodiol diacetate/50 mcg ethinyl estradiol

Actions—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision. Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1,3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboemholism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboemholic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot he determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary emholism and cerebral thromhosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions; neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in lihido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfohromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and hutanol extractahle protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

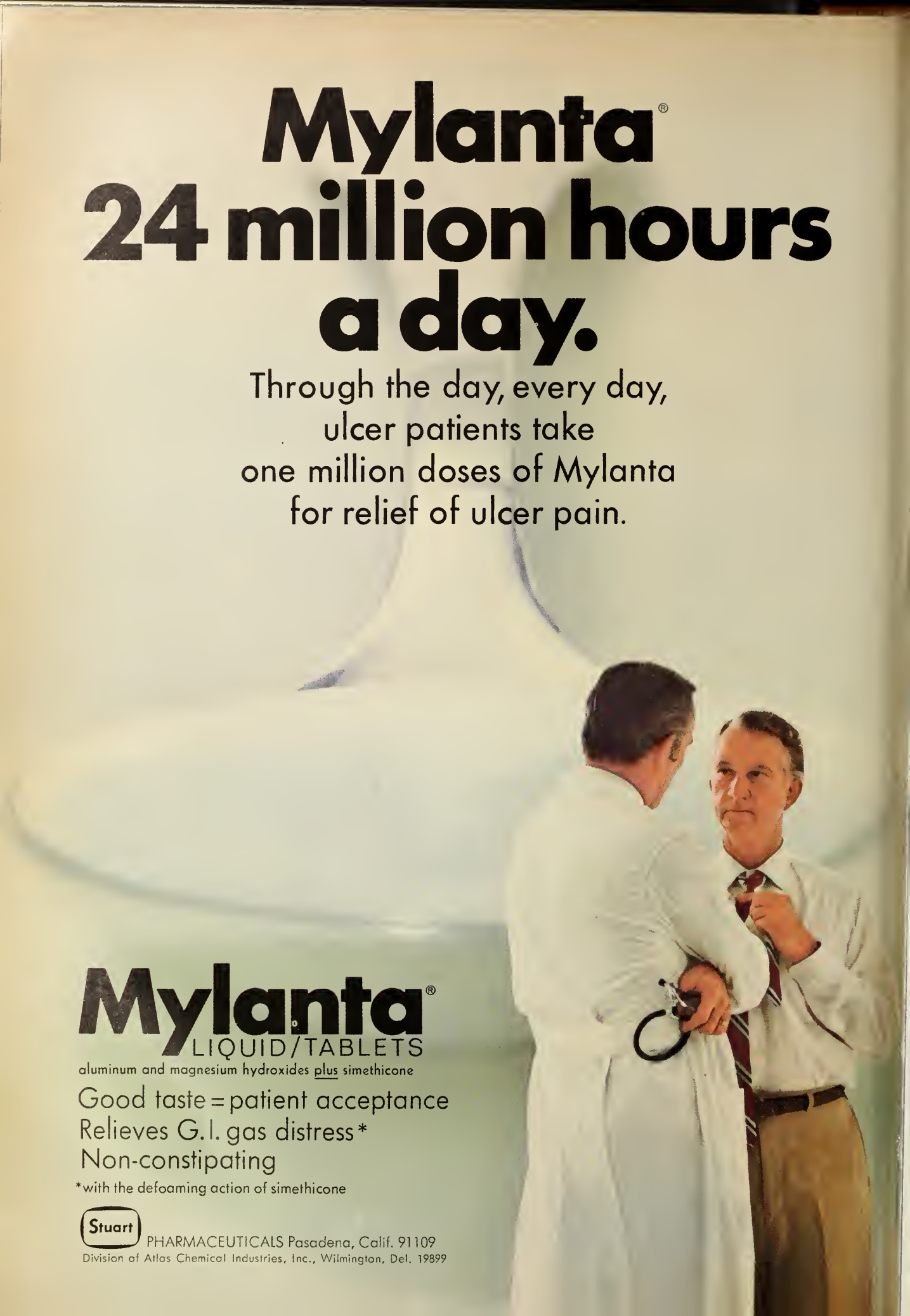
References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*: 267-279 (May) 1967. *2.* Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. *3.* Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. *4.* Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

0A4

SEARLE Where "The Pill" Began
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.



Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

Planned Parenthood 40 Years In Alabama

By

O. Thomas Bolding, M. D.

Lee F. Turlington, M. D.

Leadership for Planned Parenthood support is nessary if the human race is to continue to live on this planet beyond the end of this century.

This is the verdict of science. Our affluent social and cultural system is face-to-face with the threat of total destruction because of three facts:

(a) The pollution of the air we breathe.

(b) The pollution and spoilage of the water which we must have to sustain life.

(c) The population explosion. This is a medical paradox. With improved medical skills, technology and expanded knowledge, infant and maternal mortality has been reduced very precipitously during recent years. It is also true that the population explosion has been accelerated by inadequate housing, lack of effective education, unequal opportunities for economic advancement, and the changing sex mores of large segments of the population; planned parenthood service is essential if the war against poverty is to be won.

(d) Medical science has reduced or conquered many diseases both communicable and chronic, that in the past took heavy toll of life at all age levels. The Healing Art has thus extended the average life span. In 1900 it was 47.3 years—in 1970 it is 70.5. Modern medicine has removed much of the suffering and disability previously pandemic in human experience.

Modern science which created the instruments and substances that caused the pollution of our air and water can and will find and make available corrective measures before a terminal crisis is reached. Our basic survival instincts assure the solution of these two aspects of the problem.

The population explosion—that is another and more difficult matter. This aspect of the pollution threat to the survival of human life cannot be removed or controlled by legal or social measures. The deeply implanted re-

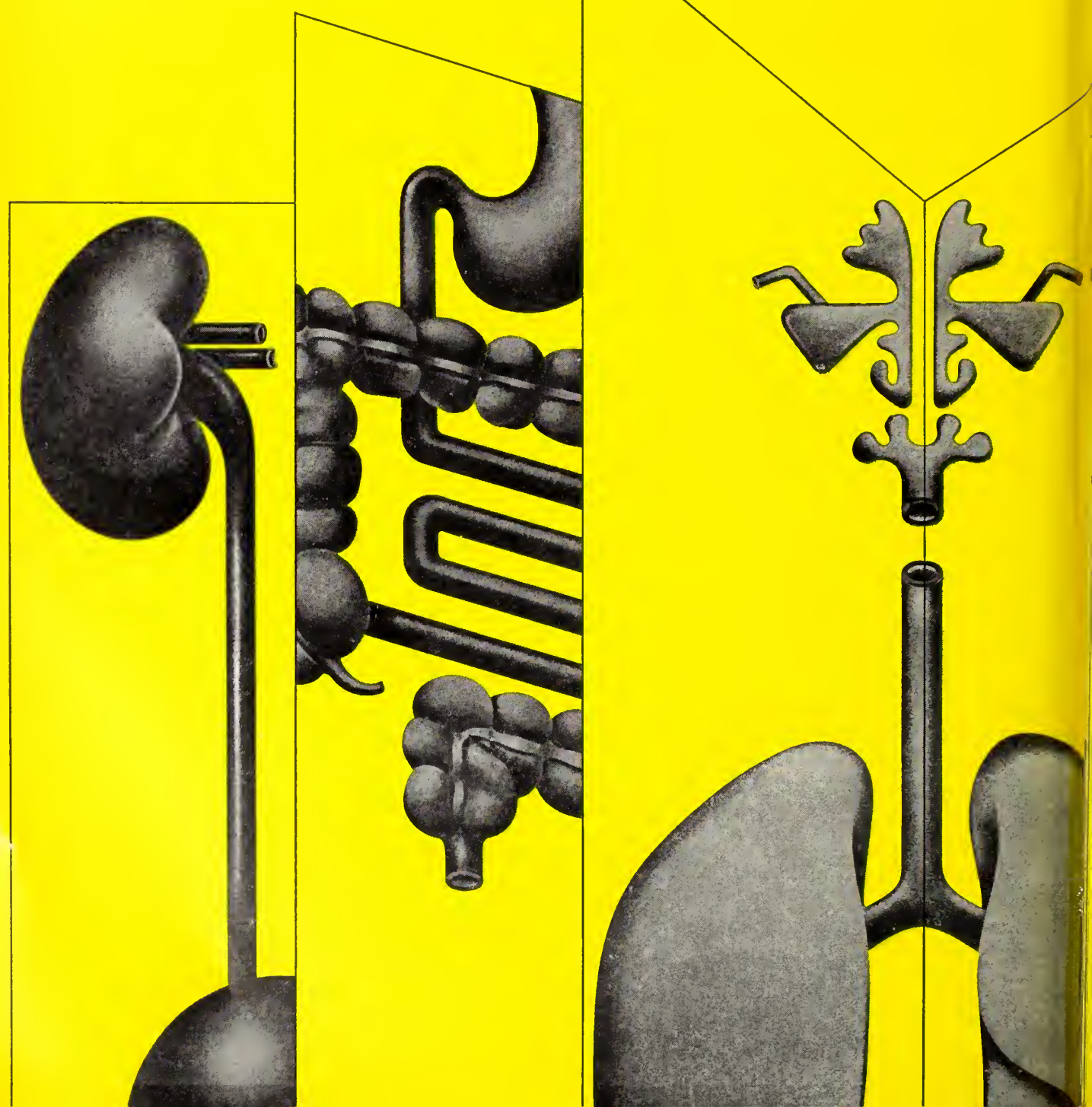
(Continued on Page 453)

Tract Record.

A record of clinical efficacy in treating bacterial infections of the respiratory, genitourinary and gastrointestinal tracts caused by susceptible strains of pneumococci, H. influenzae, staphylococci, streptococci, Klebsiellae, E. coli, Enterobacter, Shigella.

A record of years of dependable broad-spectrum activity.

A record of high urine and serum antibiotic levels all with a 500mg. potency, b.i.d. convenience and low prescription cost.



Tetrex® bidCAPS® (500 mg. tetracycline phosphate complex)

For complete information consult Official Package Circular.
(3) 4/2/70

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.

Contraindications: Hypersensitivity to tetracyclines.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Supplied: Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

(Continued from Page 451)

productive life force does not yield to legal or social prohibition. Fortunately, medical science, motivated by the higher ideals of service, has made available instruments, drugs, and methods by which, if provided, men and women can in their own health and survival interest solve this problem voluntarily. The most promising program known to social and medical science is described as *planned parenthood*, the birth of new life not by the expression of blind sexuality, but as the intelligent voluntary efforts on the part of men and women who understand the present increasing danger to human life on this planet as well as the social, economic, and health progress that will result from family planning.

It is rare today to find anyone who feels that unplanned families or neglected children and burgeoning population are to be desired. In the merely 40 years of its existence the Alabama program of family planning has developed from a single private clinic to a statewide program of child spacing with wide professional and medical support. The program has clinics in all 67 county health centers with limited personnel due to inadequate financial support, and a successful mobile unit serving areas in two Alabama counties. Most recently, Poverty Program projects in Jefferson County's Neighborhood Centers and in several other counties have been added by the Planned Parenthood League of Alabama. In 1930 during the early days of the depression, the real pioneers of the movement in Alabama, Dr. Clifford Lamar, Dr. Lee Turlington, Dr. Henry Edmonds, Rabbi Morris Newfield, Miss Elizabeth LaForge and Bishop Clingman, met to discuss the problem of child spacing here with Dr. Clarence J. Gamble, a Boston physician, whose life and fortune have been dedicated to family planning. The inspiration from his visit and his promise of financial help brought about the formation of the Maternal Welfare Association, dedicated to the betterment of family life and to the use of family planning to combat

Alabama's near-top rate in the United States in maternal and child mortality.

In 1938, following similar action in 1937 by the American Medical Association, the Medical Association of the State of Alabama endorsed "the rendering of information and advice concerning the prevention of conception . . . under medical control." With money refused for a statewide program in another state at this time, the Maternal Welfare Association succeeded in getting Dr. J. N. Baker, the Alabama State Health Officer, to introduce Family Planning into the public health clinics throughout the state conditioned upon all medical decisions being left to the physician. With Dr. Baker's wise help, Alabama became the third state in the Union to include child spacing in its maternal public health program. Family Planning had come into its own, whenever and wherever the local Health Officer could be interested.

Perhaps the timing was correct for the infant organization to come into being. With the advent of "the pill" and newer contraceptive methods the family planning clinic became more than just a lip service organization. No longer did women receive merely literature and lectures, now she might also be instructed in the latest contraceptive methods. Supplies were also furnished at a reduced cost to the women desiring help.

In the earliest days, (1940-1950) before the day of "the pill," women were instructed in the barrier methods on contraception. The Rhythm method of contraception was explained and successfully used by many women during that time. This contraceptive method was accepted by the Catholic religion as not being contrary to their religious belief.

Although intrauterine contraceptive methods were in use as early as 1930's, this contraceptive method did not become a part of the family planning program in Alabama until the 1960's. The fantastic growth of the intrauterine contraceptive device method of contraception has been one of the largest reasons why the family planning movement in Alabama has succeeded. The I. U. D. approaches what medical experts consider the "ideal" contraceptive method.

e.g. (1) effective

(2) easy to use

(3) inexpensive

(4) few side effects

(5) reversible action

The newer plastic materials and substances with different designers for specific I. U. D.'s will certainly expand the use of this method. "The pill" needs no explanation. Since the work of Dr. Garcena in Puerto Rico the hormonal approach to contraception has become the leading method in many countries, including our own. The family planning clinic here used various types of pills in our program since they have been available.

With the use of "the pill" and the I. U. D. the birth rate has shown a steady decline in Alabama for the past ten years. We need not pat ourselves on the back for a job well done but rather realize the task has just begun.

A report issued as of June 1970 states that 136,601 persons were receiving aid for dependent children. Of this number, 105,360 were children. Another report issued as of June 23, 1970, by the Comprehensive Health Planning Administration of Alabama states that children receiving welfare aid remain as wards of the state on the average of 7.1 years. This report after exhaustive study finds that this aid to dependent children costs $1,076.71 each year for each child—a total of $7,644.00 for the average child during the 7.1 years of dependency. *Remember that each taxpayer shares this enormous but presently necessary expenditure.* Costly as this amount appears to the average taxpayer, this figure represents only about 35 percent of the total cost.

It might be quite correct to assume that in the future, in the absence of family planning, not only would the number of dependent children increase, but also the cost per

child would be greater. It must be remembered that while family planning is essential if the war against povcrty is to be won, this program is not a substitute for present relief needs; however, the planned parenthood concept does, if adequately implemented, offer *undoubted assurance that in the future welfare expenditures can be significantly reduced.*

Considering specific needs for famliy planning in Alabama, it is estimated that in 1968 there were 175,300 medically indigent women in need of family planning. There were 33,200 women being served—leaving 142,000 medically indigent women in need of these services.

The cost of a statewide family planning program is estimated to be $24 per woman. The total cost would be 142,000 x $24 = $3,410,000. It is of importance to consider the savings of such a program. For every unwanted excess child born in the poverty group, society will, in general, pick up the tabs for the following expenses. (It should be noted that the following expenses are based on 7.1 years length of stay on welfare. This figure was obtained by using a study of aid to families with dependent children by the Alabama Department of Pensions and Security in 1967).

	EXPENSE (Per child 7.1 years)
Aid to Dependent Children (15.39 per mo. per child)	$1,311.23
Food Commodity & Stamp Program (15.00 per mo. per child)	$2,278.00
Education—(438.00 per year)	$3,110.00
Free lunches— (41.30 per person per year)	$ 534.00
Medical care— (196.00 per child per year)	$1,391.60
Total expense per child	$7,644.83*

*This figure meets only 35 percent of total need.

It is estimated that 21,670 excess births would be prevented if family planning service could be made available to the 142,000 medically indigent women. Numerous studies indicate that couples prefer on the average three children. If we use three as the number of children wanted by parents and any fourth or greater birth additional born to the mother as being excess, we find that of the 735,532 births in the period between 1959 and 1968, there were 228,778 or 31.1 percent births which could be considered excess of the desired number of three children. Alabama had a total of 63,155 births in 1968 which is a birth rate of 17.5 per 1,000 persons. Of these births, 14,570 or 23 percent of the total births, could be considered excess (4th child or greater born to mother). Of these 14,570 or 23 percent of the total births, 7,778 or 53 percent could be accounted for by the non-white race. Alabama had a total of 8,861 (14 percent) illegitimate births in 1968. Of the total births in the non-white race, 36 percent were illegitimate. Of the total illegitimate births 53 percent were already the *second* or *greater* live births to the mother. For about 20 percent of these mothers it was their fifth or greater number of live births. By adding the unwanted excess births and unwanted illegitimate births, we find a total of 21,074 unwanted births in Alabama in 1968. There is no reason to believe that the situation has significantly improved.

The question that every responsible person should consider is how much is this irresponsible parenthood costing every taxpayer? Every person is familiar with the increasing demands for taxation by federal, state and local governments in their efforts to meet the demands of welfare rolls, medical, medicare and food programs. All of us have felt the pressure of overcrowded schools, housing shortages, and urban problems. Every one who knows the facts can see the direct correlation between the social and economic problems and the rapid population avalanche.

As of April 20, 1970, Alabama was carrying 169,114 persons on relief rolls. Of these persons, 104,585 were children. This welfare program amounts to an annual cost to the taxpayer of $158,000,000.

Health officials indicate that approximate-

ly $24 would supply birth control measures for one indigent woman in need of these measures for one year. As previously stated, without adequate family planning a yearly expense of $1,076 will come about with the occurrence of each birth in the poverty groups amounting to $1,076.71 x 7.1 (average length of each child on welfare) = $7,644.00, which is the total cost for each child for 7.1 years.

The amount of savings in taxes that can be realized by this program is indeed most impressive to say the least. Nothing else can even approach it in savings and economic improvement. Aside from economic gains, family planning will raise the standards of living for the poor, relieve human misery, increase educational opportunity, and lessen many problems of environmental pollution.

Con-
ven-
ience!

Dicarbosil®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

The Month in Washington

From the Washington Office
American Medical Association

Rep. Wilbur D. Mills (D., Ark.) expressed concern about claims that prepaid group health care could solve the problems of medicare and medicaid.

Speaking to a group of business executives, the chairman of the House Ways and Means Committee, said he believed health maintenance organizations were "a reasonable alternative" for providing government-financed health care.

"However," he added, "I have become concerned that we will expect a great deal more from them than is likely to occur."

Mills said he expects health care spending figures would show that $7 out of every $100 spent in the United States for all goods and services went for health expenditures.

He noted, that the fiscal 1970 figures would show "for the first time" that federal spending did not increase as fast as private spending for health services.

"The reason for this development is that the medicare program did not grow as fast as it had been growing," Mills said.

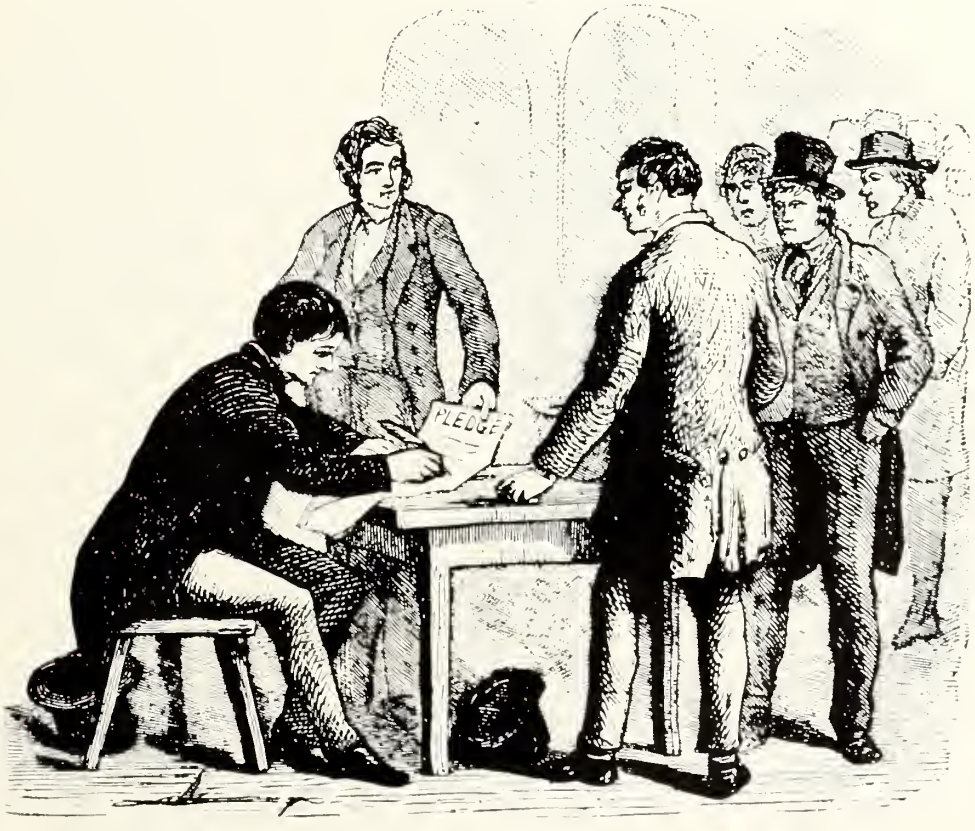
* * *

National health insurance is shaping up as one of the major domestic issues before the 92nd Congress with catastrophic illness coverage gaining support from both Democrats and Republicans.

(Continued on Page 458)

In 1818, during the first session of the House of Representatives of the Territorial Assembly of Alabama, a Representative from Monroe County petitioned for legislation placing control of the medical profession in the hands of physicians.

BLUE CROSS-BLUE SHIELD OF ALABAMA



(Continued from Page 456)

Advocates of catastrophic coverage counted on the Nixon Administration supporting such a plan although Elliot L. Richardson, secretary of Health, Education, and Welfare, called for its rejection.

Sen. Long has offered a catastrophic illness plan which calls for the government to pay 80 percent of all medical costs beyond the first 60 days of hospitalization or the first $2,000 of physicians' bills for all Americans who pay social security taxes and are under 65. He estimated the cost at $2.5 billion a year to be financed by a one-half of one percent increase in social security taxes.

The American Medical Association also cleared the way to add catastrophic coverage to its Medicredit plan for voluntary national health insurance.

Rep. Durwood G. Hall (R., Mo.), a physician, introduced during the final months of the 91st Congress, legislation that would establish a government program of catastrophic illness insurance for all Americans.

Part A (Basic Protection) of Hall's proposal would replace the present medicaid program. Each state would be authorized to determine the level of medical indigence in that state and to purchase, from private carriers, basic health insurance coverage for the medically indigent. The states would receive federal reimbursement for 85 percent of the costs.

The states would also purchase coverage for the costs of catastrophic illness expenses for the medically indigent.

Part B (Catastrophic Coverage) would have the secretary of HEW establish a program of insurance against the costs of catastrophic illness. Any U. S. resident whose income is above the level of medical indigence would be entitled to reimbursement.

Funds for this two-part program would be

(Continued on Page 461)

New Nilcol- A Comprehensive Formula:

DESCRIPTION	Contents in mg Tablet	Elixir— each 15 ml
phenylpropanolamine HCl	50	25
chlorpheniramine maleate	4	2
glyceryl guaiacolate	200	100
dextromethorphan HBr	30	15
alcohol		10%

The scored, elliptical tablet is light violet. The elixir is deep violet in color and grape-flavored.

ACTIONS Each component of Nilcol has been selected to provide symptomatic relief of congestion and cough in upper respiratory disorders.

Phenylpropanolamine hydrochloride is a vasoconstrictor which reduces congestion of the nasopharyngeal mucosa. Chlorpheniramine maleate, a widely used antihistamine, helps to control allergic symptoms. The expectorant is glyceryl guaiacolate which helps to increase the secretion and decrease the viscosity of fluids of the respiratory tract. Dextromethorphan is a well-known, centrally acting antitussive. Nilcol may minimize the need for topical decongestants.

INDICATIONS Nilcol is indicated for nasal and bronchial congestion; coughs and other symptoms of respiratory infections including influenza and the common cold; other respiratory conditions such as sinusitis, allergic rhinitis or hay fever.

CONTRAINDICATION Hypersensitivity to any ingredient.

PRECAUTIONS Because of the possibility of drowsiness, patients should be cautioned against driving and operating machinery. Administer with caution to patients with hyperthyroidism, hypertensive cardiovascular disease, diabetes mellitus and liver disease. Use in pregnancy is not recommended.

ADVERSE REACTIONS Anxiety, restlessness, tension, insomnia, tremor, weakness, headache, vertigo, sweating, nauseo, and vomiting may possibly occur.

SUPPLIED Tablets in bottles of 100. Elixir in bottles of 32 fl oz (1 qt) with dosage cups. N-GP-11-4C

WARNER-CHILCOTT
Morris Plains, New Jersey 07950

This is a test of this publication's advertising "Exposure." Please see below.

Introducing The Fully Therapeutic "Age-Calibrated" Non-Narcotic Cough/Cold Formula... For Any Member Of The Family*

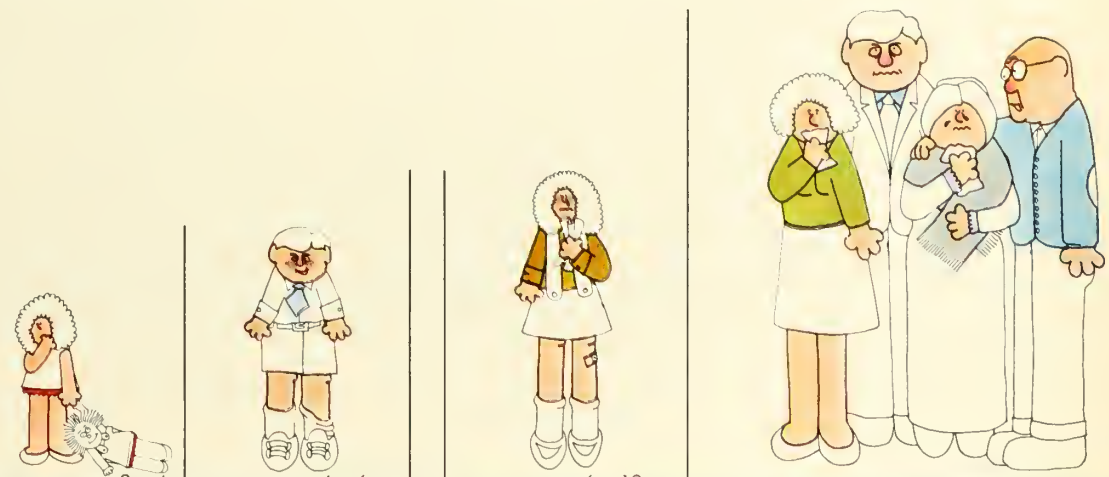
*Not for infonts under 2 yeors of oge.

New Nilcol™ Rx Tablets/Elixir

Each scored tablet contains: Phenylproponalamine HCl 50 mg, Chlorpheniramine maleate 4 mg, Glyceryl guaiacolate 200 mg, Dextramethorphan HBr 30 mg.
Eoch 15 ml af elixir contains: Phenylpropanalomine HCl 25 mg, Chlorpheniromine maleate 2 mg, Glyceryl guaiacalate 100 mg, Dextrametharphan HBr 15 mg, alcohol 10%.

An Expectorant • An Antihistamine
A Decongestant • A Non-Narcotic Antitussive

For a complimentary package, send your Rx with the name Nilcol written on it to:
Warner-Chilcott Laboratories, 201 Tabor Road, Morris Plains, New Jersey 07950.
Att: M. Adams, St.J.



	youngsters 2 to 4	youngsters 4 to 6	youngsters 6 to 12	grown-ups
Prescribe 3 or 4 times daily				
Quick-Snop-Apart **Tablets**			½ toblet	one toblet
Delicious, Grope-Flovored **Elixir**	5 ml (1 tsp) †	10 ml (2 tsp)	½ oz (1 tbs)	1 oz (2 tbs)
Rx (4 days — no-woste therapy)	3 oz	6 oz	8 oz	16 oz

†Plus "Age-Colibroted" Medicine Cup for Precision-Assured Dosoge.

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDICENTER
OF AMERICA

A Nice Place to Get Well

Medicenter of America / Hopkinsville • Louisville, Kentucky

(Continued from Page 458)

managed by a Federal Health Care Trust Fund.

Hall estimates that the Part A would cost the federal government about $3.7 billion a year. The cost to the states for Part A would be about $600,000. Medicaid presently costs the states about $2.5 billion.

There was no estimate as to the cost of Part B, but Hall said that it would be only a small fraction of the cost of a comprehensive national health insurance program of the type being pushed by organized labor.

* * *

Congress approved two bills dealing with family practice and birth control.

The main feature of the family practice legislation authorized a three-year, $225 million program to help medical schools establish departments to train family physicians.

The legislation passed the Senate and House with virtually no opposition. It was supported by the American Academy of General Practice and the American Medical Association.

Chief sponsors of the legislation hailed its passage as an important step toward alleviating the shortage of family physicians and slowing down the trend to specialization in the practice of medicine.

A family planning bill authorizes birth control services, except abortion, for all American women who cannot afford them.

To finance the program for the first three years, House-Senate conferees agreed on a compromise authorization of $387 million. Expenditure of federal funds for abortion is prohibited.

* * *

A special panel of senate consultants urged a multi-billion dollar crusade against cancer to erase its "staggering" impact of death and suffering on all mankind.

In a report to the Senate Labor and Public Welfare Committee on its four-month study of the disease, the 26-member panel estimated that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

"Given the seriousness of the cancer problem to the health and morale of our society, this allocation of national priorities seems to be open to serious question," the panel said.

It recommended doubling cancer research spending to $400 million in the 1972 fiscal year.

The panel said their recommended program "is so important to the American people and to the world" that the money should be spent even if taxes have to be raised to pay the bill.

The panel said that the cost of cancer has been estimated "as high as $15 billion per year," of which as much as $5 billion is spent on caring for patients. The balance is in the loss of earning power and productivity.

Office space to share: Due to the death of partner. Ideal for Internist or GP.

Eighteen room building in the eastern section of Birmingham. Fully equipped as follows: Laboratory staffed with A. S. C. P. technician, X-ray, Pulmonary function, Physiotherapy, Proctoscopy, EKG, etc.

No investment necessary. If desired, arrangements can be made for possible future purchase of building and equipment. If interested reply to: Box EW c/o Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104.

around the state

Vital Statistics

NEW MEMBERS

Escambia County

Wager, William Francis, b 23, mc Emory University 51, recip. Florida 70, P. O. Drawer 1056, Atmore, Alabama 36502

Morgan County

Sibrans, Dyrc Frederick, b 37, mc South Carolina 64, recip. South Carolina 69, 13th Avenue at Medical Drive SE, Decatur, Alabama 35601 I

Talladega County

Carr, Oswald Bernard, Jr., b 39, mc University Mississippi 64, recip. Mississippi 70, Sylacauga Hospital, Sylacauga, Alabama 35150 R

MEMBERS DECEASED

Baldwin County

Griffith, Muriel E., Robertsdale, Alabama, Deceased.

Houston County

Coe, Howell D., Jr., Dothan, Alabama, Deceased 11/7/70.

Talladega County

Sims, Marion H., Talladega, Alabama, Deceased.

CHANGES OF ADDRESS

Baldwin County

Godard, Claud G., present Fairhope, to P. O. Drawer AB, Fairhope, Alabama 36532

Chambers County

Heard, Charles C., present Lafayette, to 203 Oak Street, Dadeville, Alabama 36853

Clarke County

Rudder, William H., present Jackson, to P. O. Box 33, Jackson, Alabama 36545

Covington County

Moore, Morgan J., present Andalusia, to P. O. Drawer 370, Andalusia, Alabama 36420

Cullman County

Barnes, Everett B., present Cullman, to 806—2nd Avenue West, Cullman, Alabama 35055

Clemmons, Lowell H., present Cullman, to 201—2nd Avenue East, Cullman, Alabama 35055

Crocker, Francis L., Jr., present Cullman, to 400 East Arnold Street, Cullman, Alabama 35055

McAdory, Edward D., present Cullman, to 324½ 1st Avenue West, Cullman, Alabama 35055

Morris, John T., Jr., present Cullman, to 203—2nd Avenue East, Cullman, Alabama 35055

Nixon, Willard L., present Cullman, to 113—2nd Avenue, N. E., Cullman, Alabama 35055

Dallas County

Cox, Clyde B., Jr., present Selma, to 611 Broad Street, Selma, Alabama 36701

Downard, Joe T., present Selma, to P. O. Box 1426, Selma, Alabama 36701

Dumont, Isabel S., present Selma, to P. O. Box 1036, Selma, Alabama 36701

Hagood, Joseph H., Jr., present Selma, to P. O. Box 1426, Selma, Alabama 36701

Henderson, Robert J., Jr., present Selma, to 203 Vaughan Memorial Drive, Selma, Alabama 36701

Kirkpatrick, Samuel M., present Selma, to 228 Selma Avenue, Selma, Alabama 36701

Ross, Carlos J., present Selma, to P. O. Box 1426, Selma, Alabama 36701

Williams, J. Richard, present Selma, to No. 5 Winthrop Court, Selma, Alabama 36701

Etowah County

Johnston, William W., present Gadsden, to 140 Alpine View, Gadsden, Alabama 35901

Jackson County

Elmore, Horace L., present Bridgeport, to Box C-3, Bridgeport, Alabama 35740

Jefferson County

Abele, Henry B., present Birmingham, to 401 Lowell Drive, Huntsville, Alabama 35801

Abernathy, Frank, Jr., present Birmingham, to P. O. Box 2727, Birmingham, Alabama 35202

Collier, James B., present Birmingham, to 1100 Bankhead Highway, S. W., Graysville, Alabama 35073

Donald, Joseph M., Jr., present Birmingham, to 1316 South 19th Street, Birmingham, Alabama 35205

Paul, Thomas O., present Birmingham, to 1711—9th Avenue South, Birmingham, Alabama 35205

Peacock, Thomas H., Jr., present Birmingham, to 1316 South 19th Street, Birmingham, Alabama 35205

Pearson, Robert S., present Birmingham, to 801 Princeton Avenue, S. W., Birmingham, Alabama 35211

Ramsey, Joseph H., present Birmingham, to 3116 Ryecroft Road, Birmingham, Alabama 35223

Russakoff, Abraham H., present Birmingham, to 3031 Weatherton Drive, Birmingham, Alabama 35223

Wainwright, Samuel P., present Birmingham, to 1407 Avon Circle, Birmingham, Alabama 35213

Wallace, Samuel H., Jr., present Blountsville, to 4416 Clairmont Avenue, Birmingham, Alabama 35222

Madison County

Rowe, Richard A., present Huntsville, to Suite 204, 930 Franklin Street, Huntsville, Alabama 35801

Mobile County

Hinton, Lawrence H., present Mobile, to 120 Louiselle Street, Mobile, Alabama 36607

Lester, Richard P., present Mobile, to 2301 DeLeon Avenue, Mobile, Alabama 36607

Montgomery County

Smith, William L., present Montgomery, to 22 South Jackson Street, Montgomery, Alabama 36104

Sorrell, Walker B., present Montgomery, to P. O. Box 4160, Montgomery, Alabama 36104

Morgan County

Galloway, George W., Jr., present Decatur, to 140 River Court Parkway, Atlanta, Georgia 30328

Walker, William A., present Decatur, to P. O. Box 1843, Decatur, Alabama 35601

Tuscaloosa County

Shamblin, R. Dawson, present Tuscalooosa, to Route 3, Box 41B, Northport, Alabama 35476

NEW TELEPHONE NUMBERS

Abele, Henry B., Jefferson — 539-4148

Carr, Oswald B., Talladega — 245-4311

Donald, Joseph M., Jr., Jefferson — 933-2000

Heard, Charles C., Chambers — 825-4082

Johnston, William W., Etowah — 547-8260

Langstaff, Quintus A., Lauderdale — 766-7470

Lester, Richard P., Mobile — 473-8804

Meadows, Henry H., Jr., Lowndes — 548-2151

Moore, Morgan J., Covington — 222-4116

Paul, Thomas O., Jefferson — 322-4575

Peacock, Thomas H., Jefferson — 933-2000

Pearson, Robert S., Jefferson — 787-1411

Rowe, George T., Cullman — 352-2631

Rowe, Richard A., Madison — 539-9800

Sibrans, Dyre F., Morgan — 355-5355

Wager, William F., Escambia — 368-5881

Wainwright, Samuel P., Jefferson — 322-4744

Welch, Elbert S., Cullman — 352-6472

ADD SPECIALTY

Jefferson County

Nunis, Jimmy B., 1529 North 25th Street, Birmingham, Alabama 35234—D

Lauderdale County

Ambrose, Melton C., 416 Seminary Street, Florence, Alabama 35630—Oph

Nofzinger, John D., 220 West Tennessee Street, Florence, Alabama 35630—NS

Russell County

Blake, Thomas B., Jr., 1103—14th Street, P. O. Box 1127, Phenix City, Alabama 36867—GP

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochlaride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantain 0.14 Gm.)

Contraindications: Knawn sensitivity ta sulfanamides.
Precautions/Adverse Reactions: The usuol precautions for topicol and systemic sulfanomides should be observed because af the possibility af absorptian. Burning, increased local discomfort, skin rash, urticario or other manifestotions of sulfonomide toxicity ore reasons to discontinue treatment.
Dosage: One applicatorful or ane suppositary intravaginally once or twice dally.
Supplied: Cream – Four-ounce tube with or without applicotor. Suppasitories – Box of 12 with applicatar.

TRADEMARK: AVC AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

Prominent Montgomerian, 50-Year Club Member, Dies

DR. REYNOLDS

Three generations in medicine, spanning the life history of Alabama from its birth in December, 1819, came to an end in December, 1970, with the death of Fred Dawson Reynolds, M. D.

More than half, or 81 years of the 151, are covered by the life of Dr. Fred Reynolds, who was born on Tuesday, Oct. 8, 1889, in Skipperville, Dale County. He, his father and grandfather were featured in a Fathers-and-Sons-in-Medicine feature published in the Journal in October, 1969, or within two months of Alabama's sesquicentennial.

A graduate of the University of Alabama, Dr. Reynolds earned his M. D. degree from Johns Hopkins, Baltimore, in 1916; immediately becoming examining physician for patriotic American boys volunteering in the British army as this country hesitated on the brink of war; going to France in the Medical Corps; and returning to this country in June, 1919, with the rank of captain. Eleven days later he was in Montgomery as assistant State epidemiologist, resigning in 1920 to enter private practice in the Alabama capital.

Survivors include his widow, the former Violet Barnett of Memphis, the first president of the Woman's Auxiliary to the Montgomery County Medical Society when it was organized 22 years ago, State President of WAMASA (1951-52), and Secretary-Bookkeeper of ALAPAC from 1965 to 1969, when she was forced to resign because of her husband's deteriorating health; and one sister, Mrs. Ruth Reynolds Carroll, Ozark. Funeral and burial were in Montgomery.

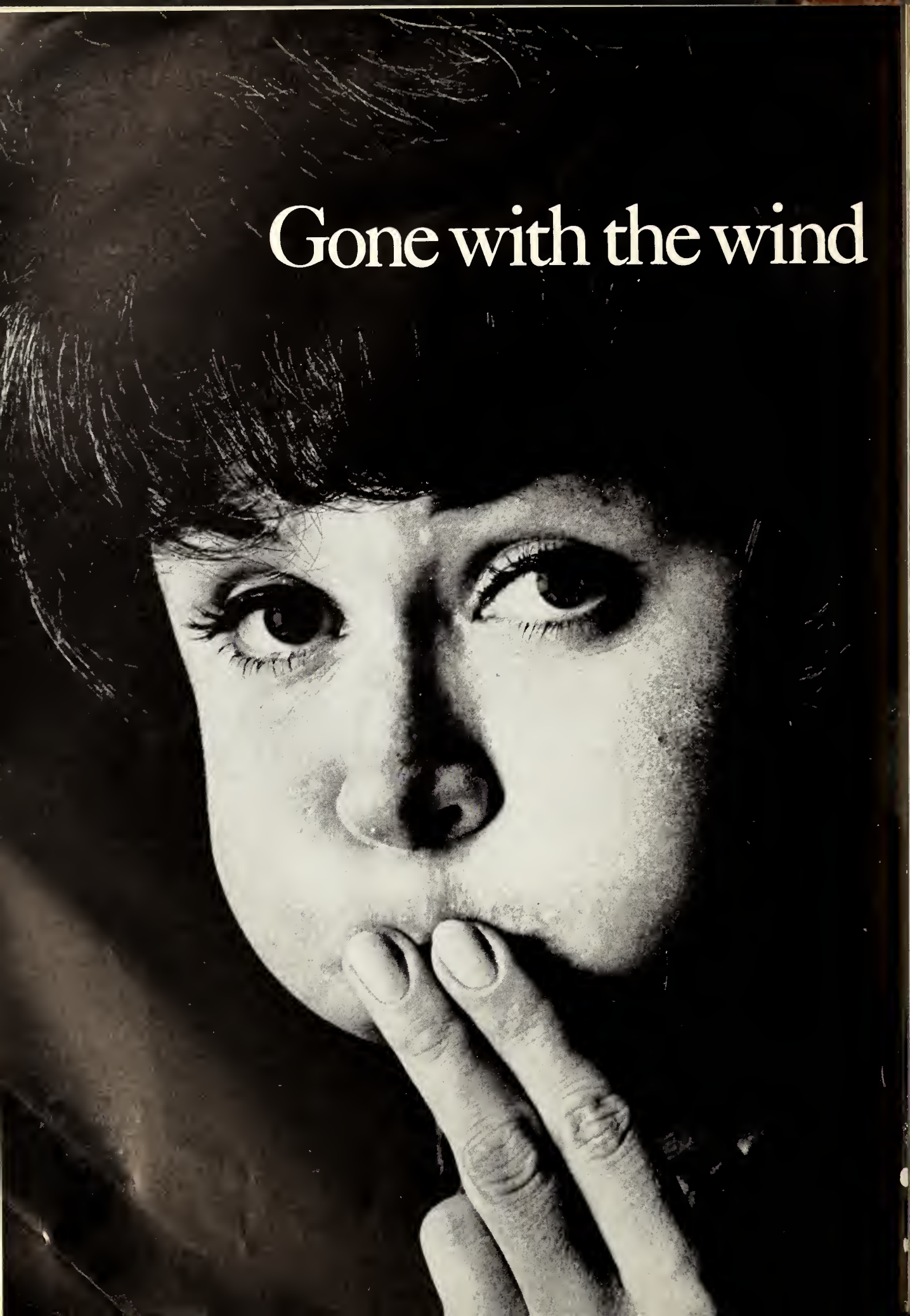
Potentate of the Alcazar Shrine in 1943, all past Potentates were honorary pallbearers at his funeral.

The Tyranny Of Noise

One balmy April morning in 1964, hundreds of New Yorkers in apartments and hotels fringing the intersection of 55th Street and 6th Avenue were snatched from sleep by a shattering explosion. Unlike any blast ever heard before or since, it would continue to batter the eardrums of everyone within a six-block radius from 7 a. m. to 4:30 p. m. five days a week, for the next three years.

In that 156-week period, hotels emptied, apartment leases were broken, customers vanished from stores, and property values plummeted, all in the name of progress, as a contractor's army used 80-pound pneumatic paving-breakers, track-mounted high-impact rock drills, giant cranes and bulldozers, with tools powered by a battery of five portable air compressors on an open-cut subway extension project for the New York City Transit Authority.

Under the title, "The Tyranny of Noise, The World's Most Prevalent Pollution," Robert Alex Baron, one of the victims, wrote a book about it, just published by St. Martin's Press, New York. It is a book of 300 pages. —M.


Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select

Silain-Gel® Tablets:

when the patient prefers a liquid, select

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide

Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

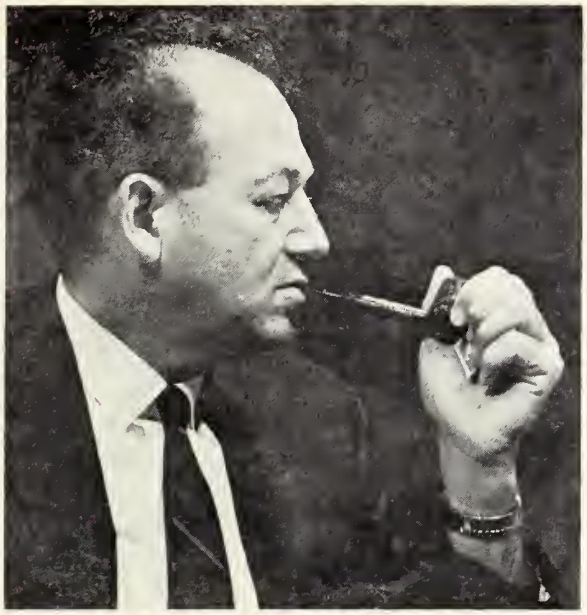
Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Escambia Nominates Phillippi For MASA President-Elect



DR. PHILLIPPI

The first and, at Journal press time, the only candidate for President-elect of the Medical Association of the State of Alabama, to be chosen at next April's annual meeting in Birmingham, is Frank Marion Phillippi, Jr., M. D., of Brewton.

Dr. Phillippi was put in nomination by the Escambia County Medical Society. The office is customarily rotated between the three natural divisions of the State and in 1971 it will be South Alabama's turn.

From Camden High School, Dr. Phillippi went to Auburn for his baccalaureate, to Tulane for his M. D., interned at Charity Hospital, New Orleans, and completed a tour of war duty in France and Germany with the 112th Evacuation Hospital before returning to Alabama to begin the general practice of medicine in Brewton in 1946, where he has been since.

In the years since then he has filled many committee assignments with the Legislative, Sports, Rural Health, Public Relations, and Finance Committees; and six years ago began his first term as Vice-President for MASA's Southwestern division, and for the last two years has been the ALAPAC Director from the 2nd Congressional District.

Dr. Phillippi is married to the former Virginia Kerlin, daughter of a Methodist minister. They have two sons, Bucky (Frank M. III), who quarterbacked Auburn's freshman team in the fall, and Mac (George McCown), a high school "tight end" whose appointment to the Naval Academy was announced but who, at last reports, was still being pursued by non-service schools over the country.

Every man believes in censorship—provided he's the censor.

Quality prevails. Truths are harder to produce than lies, but, Gad! look at the market!

Not just a motel
it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

Fathers and Sons in Medicine

This Story Begins In Covered-Wagon Days

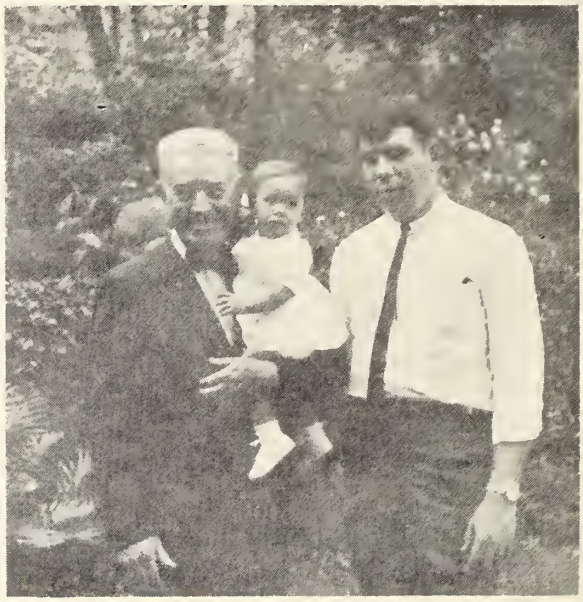
In the year we changed centuries, a family was traveling by covered wagon from El Paso, Texas to Birmingham, Alabama. An Irish immigrant tinsmith, Patrick Aloysius Coyle, and his wife, the former Anna Furry, were having to circle north as far as Memphis to cross the bridge over the Mississippi.

Somewhere just outside Camden, Arkansas, the lumbering wagon halted and a son was born. The date was Oct. 30, 1900, and the son was christened Daniel Joseph Coyle. Three score and ten years later, to the month, there is another of that name, and father and son are practicing physicians in Birmingham, subjects of this sketch.

The senior Dan completed his high school education in Birmingham and in 1918 entered the University on an SATC (Student Army Training Corps) scholarship. War's end brought the scholarship's end for him, and it took eight years of leapfrogging jobs and learning to a BS-MD degree. He went on to Rush Medical College, Chicago, to complete his medical education. He interned at Los Angeles General before returning to Birmingham where he was associated with Drs. Seale Harris and Earl Drennen, studying under such men as Adrian Taylor and George Pack. He was the first resident at the Baptist Hospital on Highland Avenue as a holdover from the Seale Harris Clinic.

Dr. Coyle, Sr., is today in general practice in Birmingham's Woodward Building, precisely the same offices where his name first went on the doors 39 years ago.

In 1932 Dr. Coyle was married to Miss Julia Bledsoe of the family well known in the Union Springs-Tuskegee area, where the Bledsoe plantation is still in the hands of that same family.



DRS. COYLE, SENIOR AND JUNIOR, with a potential third generation in medicine, Daniel Joseph Coyle III.

Three years later came their firstborn son, arriving July 11, 1935, as St. Vincent Hospital, Birmingham, and christened Daniel Joseph Coyle, Jr. Football was this young man's first claim to fame, and he made a high school All America playing with Ramsay High, Birmingham. Attending the University of Alabama on a football scholarship, he played end for two years on the team quarterbacked by Bart Starr. With his baccalaureate in 1957, he entered Medical School from which he was graduated four years later with his M. D. degree.

He interned at Carraway Methodist, Birmingham, and subsequently had two years of Surgery Residency under Champ Lyons, University Hospital, before serving in the Air Force in Japan. Following his tour of

(Continued on Page 477)

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

Keeps the promise of pain relief

B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

Now that there's a greater therapeutic potential for treating Parkinson's disease and syndrome

...the information on these pages will be of practical interest to you

Larodopa® (levodopa) Roche : therapy that demands slow, individualized dosage titration

With the advent of new Larodopa (levodopa), there is now an agent that holds promise of relief of all the major symptoms of Parkinson's disease and syndrome—rigidity and akinesia as well as tremor.

However, as has been reported in the medical literature, levodopa demands slow, careful titration of dosage, and frequent patient monitoring. Adverse reactions may occur at any time, some serious enough to require dosage reduction or discontinuance of therapy. Thus, before prescribing, it is particularly important to refer to the following Important Therapeutic Considerations, the sections covering dosage and administration, and to the information on monitoring the patient (see prescribing information).

Important Therapeutic Considerations

Larodopa (levodopa) is an unusual drug which must be administered with particular care. In view of its high incidence of adverse reactions, you will find the following therapeutic considerations for Larodopa important:

(a) Larodopa is not curative and its mechanism of action is unknown, though postulated.

(b) Long-term safety and efficacy for Larodopa have not been established.

(c) Accurate diagnosis is imperative since there is no evidence that Larodopa is effective in neurological diseases other than Parkinson's disease and syndrome.

(d) About one-third of patients or more will not experience clinical improvement on Larodopa, and virtually 100% of patients will experience side effects of some degree.

(e) The dose of Larodopa producing maximal improvement with tolerated side effects must be *carefully titrated for the individual patient.*

(f) Finally, there is no evidence that early treatment with Larodopa, while possibly controlling symptomatology, alters the course of the disease.

Photographs of patients treated with Larodopa by permission of the patients.

Guide to dosage and administration of Larodopa® (levodopa) Roche

Usual daily dosage—initially, 0.5 to 1 Gm daily (divided in 2 or more doses with food).

Total daily dosage—increased gradually in increments of 0.125 to 0.75 Gm every 2 or 3 days, as tolerated.

Usual daily dose range—from 4 to 6 Gm given orally in 3 or more divided doses, with food.

Daily dosage should NOT exceed 8 Gm.

Optimal therapeutic dosage—usually reached in 6 to 8 weeks.

Establishing optimal dosage—must be determined and *carefully titrated for the individual*—gradually increase dosage until: (1) maximal response is seen, or (2) maximum recommended dosage is reached, or (3) side effects preclude further dosage increase, or require reduction or discontinuation of dosage.

Interrupted therapy—after brief interruption, dosage should again be adjusted gradually. (In many cases, the patient can be rapidly titrated to his previous therapeutic dosage. See "Precautions" section of Complete Prescribing Information.)

To underscore the extreme importance of careful dosage titration, the following week-by-week dosage pattern has been prepared, based on the assumption that the course of therapy is uninterrupted by any complications requiring a change in dosage. (Again, dosage must be reduced when intolerable side effects occur.)

Because it is absolutely imperative that Larodopa therapy be individualized to meet the particular needs of each patient, the following dosage schedule should be considered only a model.

Larodopa®
levodopa/Roche

Titration of Larodopa (levodopa) dosage in patient evaluated weekly

Intervals	0.25 Gm Tablets	0.5 Gm Tablets	Total Daily Dose
Week 1	½ tab (0.125 Gm) *q.i.d.* w/ food		0.5 Gm
Week 2	1 tab (0.25 Gm) *q.i.d.* w/ food		1.0 Gm
Week 3	1½ tab (0.375 Gm) *q.i.d.* w/ food		1.5 Gm
Week 4		1 tab (0.5 Gm) *q.i.d.* w/ food	2.0 Gm
Week 5		1½ tab (0.750 Gm) at breakfast and dinner. 1 tab (0.5 Gm) at lunch and bedtime	2.5 Gm
Week 6		1½ tab (0.750 Gm) *q.i.d.* w/ food	3.0 Gm
Week 7		2 tab (1.0 Gm) at breakfast and dinner. 1½ tab (0.750 Gm) at lunch and bedtime	3.5 Gm
Week 8		2 tab (1.0 Gm) *q.i.d.* w/ food	4.0 Gm

The daily maintenance dosage in the above example may be increased, decreased, or maintained at the 4 Gm level depending upon the point at which optimal therapeutic results are achieved.

Concurrent therapies: Larodopa (levodopa) may be used concomitantly with other antiparkinsonism drugs such as benztropine mesylate (Cogentin), trihexyphenidyl HCl (Artane) or procyclidine HCl (Kemadrin), but when more than one drug is used, the usual dose of each may have to be reduced.

Not to be given concomitantly: MAO inhibitors. Such agents must be discontinued two weeks prior to initiating Larodopa therapy.

Note of caution for patients who require vitamin supplementation: It has been reported that pyridoxine HCl (vitamin B_6) can rapidly reverse the antiparkinson effects of levodopa therapy.

A timetable for monitoring

While it cannot be emphasized too strongly that each patient on Larodopa must be treated as a totally *distinct* entity, the following are suggested as guidelines in the monitoring of such patients.

1. For the first month, at least: the average ambulatory outpatient should be seen and evaluated a minimum of *once a week.*

2. During the second month: patient evaluations can be extended to *every two weeks* (assuming no laboratory abnormalities or intolerable side effects have occurred).

3. From the third through the sixth month: the patient should be evaluated *once a month.*

4. After six months on the appropriate maintenance dose: with no significant adverse reactions or laboratory abnormalities, the patient should be seen at least *once every two months.*

5. Finally, after one year on maintenance dosage: evaluation should be made no less than *once every three months.*

Therapeutic response

A favorable response may often be seen within 10 days to several weeks. However, a patient should not be taken off a tolerable dose—even in the absence of a response—until six months have elapsed. This is because, in some instances, the response may come relatively late. Of course, any serious laboratory abnormalities or intolerable side effects automatically dictate discontinuance of therapy.

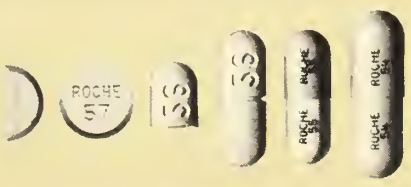
Lessening the side-effects problem

While it is generally advisable that levodopa be taken after meals, nausea and vomiting, two frequently occurring side effects of levodopa, can often be minimized by taking medication with foods. If nausea becomes intolerable, the dosage should be cut back in daily decrements equal to the most recent increments given the patient. This reduction is to be spaced over two- or three-day intervals. Conversely, as nausea subsides, the drug dosage should be slowly increased in like increments.

An important part of the routine monitoring procedure would be to determine any possible cardiovascular problems. If cardiac arrhythmias occur, Larodopa should be discontinued and other antiparkinson therapy instituted. With orthostatic hypotension a possibility, checking the patient's blood pressure (both supine and standing) is essential.

If choreiform movements appear, they usually occur when maximum therapeutic dosages are reached. To control such effects, reduce dosage by decrements of 0.5 Gm daily.

Flexible dosage: scored tablets of 0.25 Gm and 0.5 Gm help simplify dosage titration



Conveniently scored 0.25 and 0.5 Gm tablets make possible more precise titration. Should another dosage form be preferred, Larodopa is also supplied in capsule strengths of 0.25 and 0.5 Gm.

Before prescribing, please consult produet information on next page. →

Larodopa®
levodopa/Roche

For the relief of symptoms associated with Parkinson's disease and syndrome

Before prescribing, please consult complete product information, a summary of which follows:

BECAUSE OF THE HIGH INCIDENCE OF ADVERSE REACTIONS AND THE NECESSITY FOR INDIVIDUALIZING THERAPY, THE PHYSICIAN SHOULD THOROUGHLY FAMILIARIZE HIMSELF WITH THE INFORMATION IN THE PACKAGE INSERT BEFORE INSTITUTING THERAPY WITH LARODOPA (LEVODOPA). ACCURATE DIAGNOSIS IS IMPERATIVE BECAUSE EVIDENCE IS LACKING THAT LARODOPA IS EFFECTIVE IN NEUROLOGICAL DISEASES OTHER THAN PARKINSON'S DISEASE AND SYNDROME.

ADEQUATE CLINICAL AND LABORATORY FACILITIES SHOULD BE AVAILABLE FOR PROPER MONITORING OF TREATMENT.

THE LONG-TERM SAFETY AND EFFICACY OF LARODOPA HAVE NOT BEEN ESTABLISHED.

Indications: For the treatment of Parkinson's disease and syndrome. Useful in relieving many of the symptoms, particularly rigidity and bradykinesia; frequently helpful in management of associated tremor, dysphagia, sialorrhea and postural instability.

Contraindications: In patients for whom a sympathomimetic amine is contraindicated; in patients receiving MAO inhibitors (the latter should be discontinued two weeks prior to initiating therapy with Larodopa); in patients with clinical or laboratory evidence of **uncompensated** endocrine, renal, hepatic, cardiovascular or pulmonary disease; with narrow angle glaucoma and blood dyscrasias; in patients with known hypersensitivity to levodopa.

Warnings: Long-term safety and efficacy not established. Administer with extreme caution to patients with bronchial asthma or emphysema who may require sympathomimetic drugs; to those with active peptic ulcer (in facilities equipped to treat gastrointestinal hemorrhage); in patients with psychoses or severe psychoneuroses. Initiate therapy with extreme caution and in proper treatment facility in patients with a history of myocardial infarction who have residual atrial, nodal or ventricular arrhythmias. Monitor all patients for development of mental changes, depression with suicidal tendencies, other serious antisocial behavior. Carefully consider concomitant administration of pyridoxine hydrochloride (vitamin B_6); oral doses of 10 to 25 mg have been reported to rapidly reverse the antiparkinson effects of Larodopa. In pregnancy, weigh potential benefits against possible hazards. Do not use in nursing mothers. Safety of Larodopa in children under age 12 not established.

Precautions: During extended therapy, periodic evaluations of hepatic, hematopoietic, cardiovascular and renal function recommended. In diabetic patients, control may be adversely affected; careful, frequent monitoring and proper adjustment of antidiabetic regimen required. Patients with chronic wide angle glaucoma may be treated cautiously provided intraocular pressure is well controlled and patient is monitored carefully. Monitor carefully patients receiving antihypertensive agents or psychoactive drugs concomitantly, or those with history of convulsions. If general anesthesia is required, discontinue Larodopa 24 hours prior to surgery; monitor cardiorespiratory functions carefully. Patients who improve on Larodopa therapy should resume normal activities cautiously. May be used concomitantly with other antiparkinson drugs with possible reduction in dosage of each.

Adverse Reactions: *Most frequently occurring:* nausea, anorexia, emesis, cardiac irregularities, orthostatic hypotension; choreiform, dystonic and other adventitious movements; dizziness, sedation, dyskinesia; psychiatric symptoms such as agitation, anxiety, confusion, depression, hallucinations, delusions, insomnia, nightmares, and mental changes including paranoid ideation and psychotic episodes. *Less frequently occurring* and listed according to system: *psychiatric*—suicidal tendencies, increased libido with serious antisocial behavior, euphoria, lethargy, stimulation, fatigue and malaise, dementia; *neurological*—ataxia, convulsions, faintness, impairment of gait, headache, increased hand tremor, akinetic episodes, torticollis, trismus, oculogyric crisis, weakness, numbness, bruxism; *gastrointestinal*—constipation, diarrhea, epigastric and abdominal distress and pain, flatulence, eructation, hiccups, sialorrhea, difficulty in swallowing, bitter taste, dry mouth, tightness of mouth, lips or tongue, duodenal ulcer, gastrointestinal bleeding, burning sensation of the tongue; *cardiovascular*—nonspecific ECG changes, palpitations, hypertension, flushing, phlebitis; *hematological*—hemolytic anemia (1 case); *dermatological*—sweating, edema, hair loss, pallor, rash, bad odor; *musculoskeletal*—low back pain, muscle spasm and twitching, blepharospasm, musculoskeletal pain; *respiratory*—feeling of pressure in the chest, cough, hoarseness, bizarre breathing pattern, postnasal drip; *urogenital*—urinary frequency, retention, incontinence, hematuria, nocturia, and one report of interstitial nephritis; *special senses*—blurred vision, diplopia, dilated pupils, activation of latent Horner's syndrome; *other*—fever, hot flashes, weight gain or weight loss.

Nausea, anorexia and vomiting usually obviated by temporary dosage reduction and/or administration with food. If cardiac arrhythmias occur, discontinue and institute other antiparkinson therapy. Reduce dosage when involuntary movements occur.

The following have been noted: elevation of BUN, SGOT, SGPT, LDH, bilirubin, alkaline phosphatase or PBI; occasionally, reductions in WBC, hemoglobin and hematocrit; elevations of uric acid with use of colorimetric method but not with uricase; rarely, positive Coombs test; dark sweat and urine.

Dosage and Administration: Because of the strong possibility of adverse reactions and the necessity for individualizing therapy, the physician should thoroughly familiarize himself with the information in the package insert before instituting therapy.

How Supplied: *Tablets*, pink, scored, containing 0.25 Gm levodopa (imprinted Roche 57) or 0.5 Gm levodopa (imprinted Roche 56)—bottles of 100 and 500.

Capsules, containing 0.25 Gm levodopa (pink and beige, imprinted Roche 55) or 0.5 Gm levodopa (pink, imprinted Roche 54)—bottles of 100 and 500.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

(Continued from Page 472)

duty, Dr. Coyle returned to The Alton Ochsner Medical Foundation in New Orleans where he completed his Board qualification for General Surgery and stayed on for further training in colon and rectal surgery. In 1969 he completed his Board qualification in this specialty under Drs. Merrill, Hines, Pat Hanley and John Ray, then returning to Birmingham, where he has limited his practice to Surgery of the Colon and Rectum.

The younger Dr. Coyle has a brother, 18 years his junior, in whom gridiron history seems about to repeat itself. James Timothy Coyle, now 17, stands 6 feet 2, and weighs 225, and he has made All-League in the Los Angeles area.

Young Dr. Coyle is married to the former Lillian Lake Trechsel, Birmingham, and they have three adopted children: Dan III, Christopher Lake, and Julia Gayle, ages 5, 3 and 1 respectively.

Father and son have related h o b b i e s. Senior's avocation is buying old houses and "fixing them up," while the junior Dr. Coyle's relaxing interests are painting and woodworking, aimed at refurbishing old homes. Of course the younger has never lost his absorption with football, especially where Alabama's Crimson Tide is concerned.

The Drug Epidemic

". . . When their child begins to smoke pot, baffled parents ask what they did wrong. It is just that today parents seldom do anything younger people see as being right, such as loving them, spending time with them, teaching them, working and playing with them, and telling them what it means to be human and to create order out of chaos and how to create meaning in the face of absurdity."

So in a recent book, "The Drug Epidemic," Wesley C. Westman, Ph.D., describes the family influence in drug addiction. Praised extravagantly by such individuals as Dr. Margaret Mead, Art Linkletter, and Congressman Richard L. Ottinger, this book of the drug problem, "What it means and how to combat it," has just been published by Dial of New York. In the back of it is a glossary of current drug subculture terms and a roster of addiction-referral services in the nation, including three in Alabama:—State Vocational Rehabilitation Service, Birmingham; Huntsville Mental Health Clinic, Tuscaloosa; and Hill Crest Hospital, Birmingham.—M.

Thirty-Fourth Annual Meeting
The New Orleans Graduate Medical Assembly

The thirty-fourth annual meeting of The New Orleans Graduate Medical Assembly will be held March 8, 9, 10, 11, 1971, headquarters at The Roosevelt Hotel.

Nineteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. The program will include fifty informative discussions on many topics of current medical interest, in addition to a clinicopathologic conference, medical motion pictures, round-table luncheons, and technical exhibits. This program is acceptable for twenty-two (22) prescribed hours and eight (8) elective hours by the American Academy of General Practice.

An interesting and enjoyable program of entertainment for visiting ladies has also been planned.

For further information, contact Secretary, Room 1538, 1430 Tulane Avenue, New Orleans, Louisiana 70112.

Hobbies To Fill A Doctor's Leisure

Quarter Horses Crowd The Murchison Stables

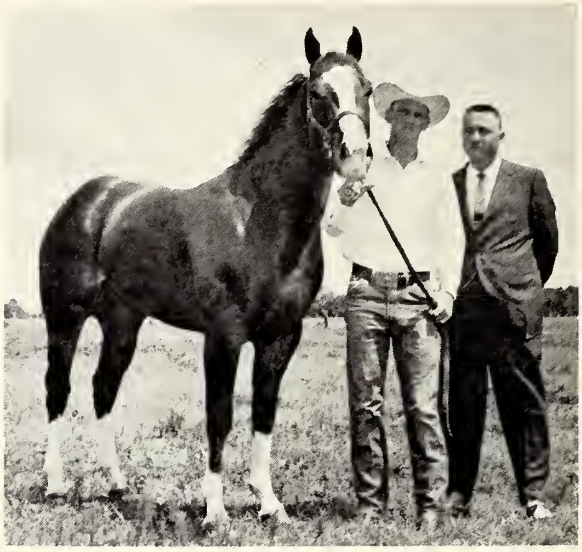
"He doth nothing but talk of his horse," complained a character in "The Merchant of Venice." But even away back then, when Shakespeare was wearing out quill pens at an astonishing rate, you may be very sure that the horse hobbiest was no doctor! Doctors had other things to talk about.

Most well rounded doctors in Alabama have a hobby—whether it be Archery or Stamps, Guns or Yachts, Sea Shells or Hunting Dogs, Fishing or Flying, Photography or what have you—but be quite certain that, of any one of them, it might be said: "He doth nothing but talk of Medicine!"

The hobby of Grover Cleveland Murchison, Jr., M. D. may properly be called one of the newer ones. Not that horses are new, but rather the kind of horses that he and his family favor. A quarter of a century ago the "quarter horse"—no pun intended—was virtually unknown.

Of course he existed, dating from the early days of Virginia when he was especially bred for the quarter-mile-long race paths of that time. But even up to 25 years ago, most Americans had never heard of him. Today this compact, well-muscled animal, strong and nimble and calm, is known as "the fastest growing breed of horse in America."

The Murchisons have quite a stable of them, including three State champions (1 cutting horse, 1 reining horse, 1 halter horse), two breeding stallions, six brood mares, two yearling colts, and two geldings. And it is a hobby that interests the entire family, including Mrs. Murchison, the former Hettie Allen Hopkins; four daughters, Cary (now Mrs. Osa Martin Phillips), Mary Eugenia, Hettie Hopkins, and Agnes Marks Murchison; and the son, Grover Richardson Murchison, though it must be admitted that the latter prefers the cockpit of an airplane to the saddle of a horse.



POKEY PERFECTO, a 2 year old registered quarter horse, is shown here with Dr. Murchison and the horse's co-owner-trainer, Jim Sullivan. Shortly after this picture was taken, young Sullivan was critically injured in an airplane accident and, without apparent cause, this horse died the next day. After five months of unconsciousness and many months of therapy to overcome a paralysis, Sullivan is now almost completely recovered. (Photo by Paul Robertson)

Born in Sylacauga Aug. 25, 1923, Dr. Murchison was graduated from Sidney Lanier, Montgomery, went on to the University of Alabama for his baccalaureate; to Cornell for his M. D. degree; and to the U. S. Naval School of Medicine. He was flight surgeon for Carrier Air Group 8 in the Korean War. And entered general practice in Montgomery in 1952.

Dr. Murchison is Past President, Alabama Academy of General Practice, and remains on its Board of Directors; a Past President of the State's Family Guidance Council; currently Chairman of MASA's Interspecialty

(Continued on Page 480)

Alabama Department of Public Health

Syphilis — 1957 to 1970

Joyce Murphree

For the first time since records have been kept, Alabama's syphilis case rate is lower than the national average. Alabama's case rate for 1970 (federal fiscal year) was 4.9 as compared to the national average of 10.2, according to figures released by Dr. Frederick S. Wolf, director of the Bureau of Preventable Diseases.

As recently as 1965, Alabama recorded 1,306 new cases of primary and secondary syphilis. Computed on the basis of cases per 100,000 population, Alabama ranked number one in the nation. A downward trend was noted in 1966, although Alabama still ranked first in the nation, and the number of cases has declined steadily over the past five years. In 1970 only 171 new cases of primary and secondary syphilis were reported, and Alabama ranked 25th among the states.

John J. Hill, senior public health advisor in the state health department's venereal disease program, said the dramatic decrease in syphilis is attributable to several factors:

—More contacts and associates are being named for each case interviewed. An average of 13.8 persons are interviewed for each case of syphilis reported.

—Prophylactic treatment is administered contacts and associates.

—The time required to get people examined once they have been named has been reduced. After a person has been assigned to an investigator, he will be examined within an average of 1.5 days. Rapid examination means spread of the disease will be stopped.

—When gonorrhea cases and contacts are treated, the medication is adequate for prophylactic treatment of incubating syphilis. The same drugs, but different amounts, are used for treatment of both diseases. Studies have shown that a high number of gonorrhea patients also have syphilis.

—Reporting of cases by private physicians has increased. In 1970 forty-two per cent of all cases of syphilis were reported by a private physician. Only 27 per cent of cases were reported by private physicians in 1969.

The venereal disease investigators of the state health department use the scientific approach to epidemiology. Each case is carefully analyzed from the standpoint of source of spread. The case is plotted on a graph, utilizing duration of signs and symptoms in relation to contact exposure dates. Source and spread can be determined from this data.

Mr. Hill noted that a high percentage of syphilis cases diagnosed in Alabama are traced to out-of-state sources. Georgia, Florida, and Tennessee are experiencing increases in syphilis, which will make eradication of syphilis impossible and control difficult for Alabama.

There is a definite need to improve the transmission of syphilis epidemiologic information from state to state, he said. Investigation is slowed when communications are by mail. The state health department transfers information to other states by telephone and confirms by mail.

Syphilis cases among high school and col-

lege students have been increasing during the past 12 months, Mr. Hill pointed out. More than half of the reported syphilis cases are in the 14-25 age group. Persons infected with syphilis are becoming more and more reluctant to name their contacts and associates, he said, making it difficult to stop the chain of infection.

Syphilis is a highly infectious disease and may ultimately be fatal if untreated. Treatment is usually uncomplicated, however, and can be accomplished with one injection of penicillin. The state health department will furnish drugs free to a private physician if there is no VD clinic in the area.

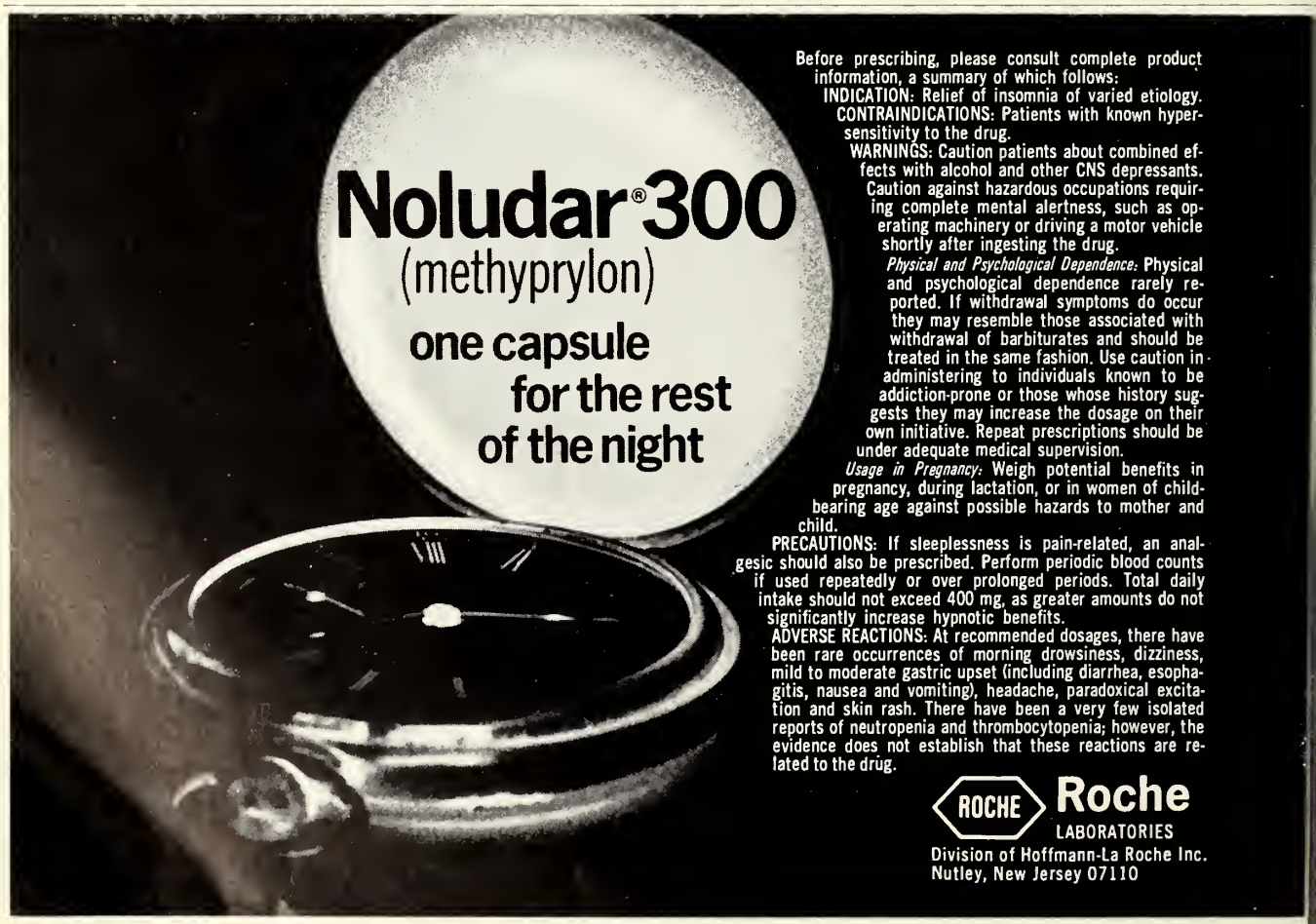
While delighted with the progress made in controlling syphilis, Mr. Hill was cautious about predicting continued success in the program. A recorded low of 147 cases was reported in 1957 followed by a cut in funds and staff. Syphilis cases immediately began climbing upward again. The venereal disease program received a 20 per cent reduction in its federal grant last year, and the number of personnel is 25 per cent less than in 1968. Budgetary cuts, a more mobile population, increased promiscuity, and increased homosexuality will make it difficult to show a decline or even to maintain the present level, he stressed.

HOBBIES TO FILL A DOCTOR'S LEISURE

(Continued from Page 478)

Council and Chairman of ALAPAC's Board of Directors; was for a decade participant and chairman of the Moral Education Program of the Montgomery YMCA, helping to plan and carry out Montgomery's projected moral education program in the schools; and is a member of the Montgomery Chamber of Commerce Health-Care Committee.

Between his medical practice in the daytime and the foregoing extracurricular activities at night, he still lists horses as his leisure-time hobby.



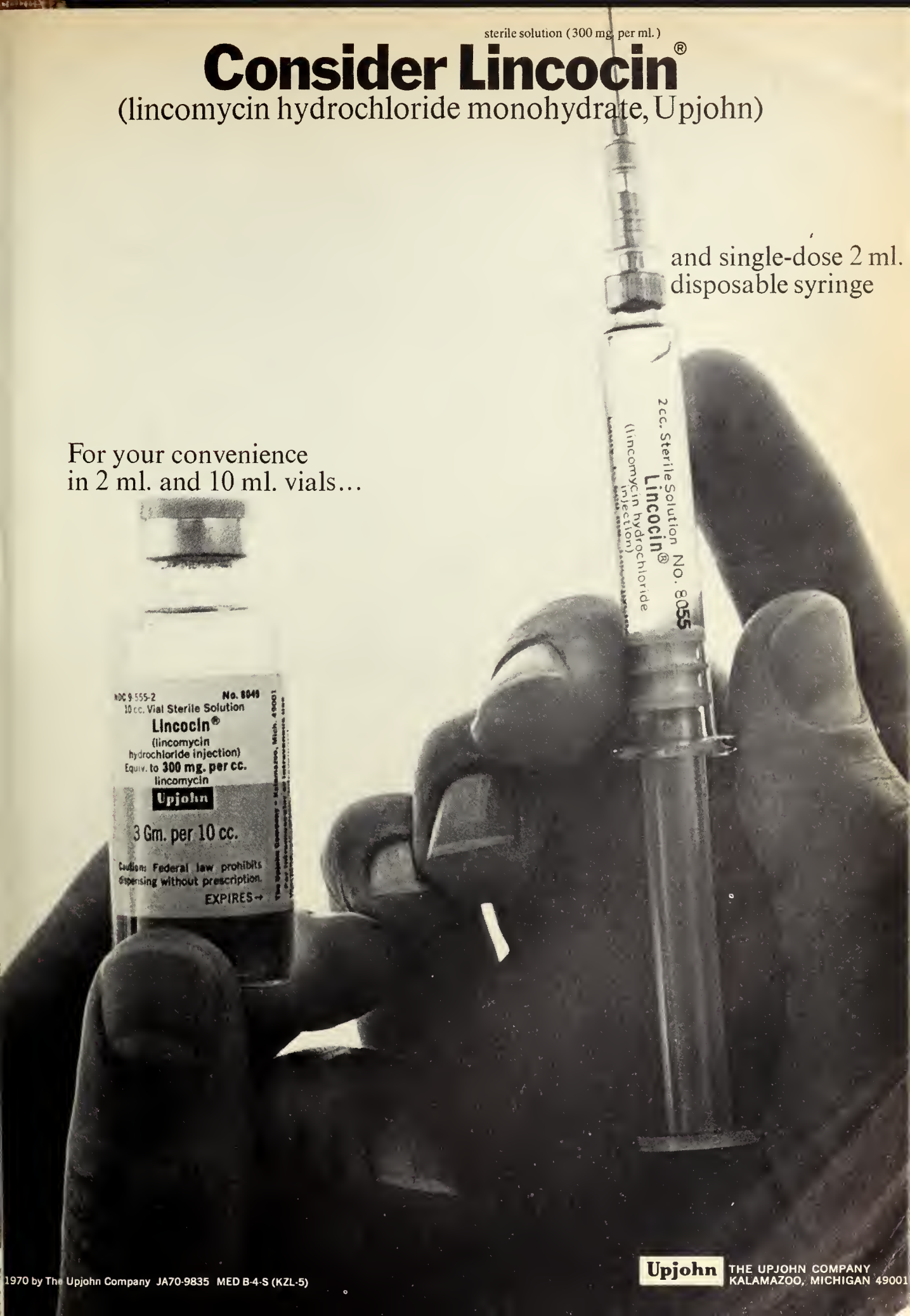
sterile solution (300 mg. per ml.)

Consider Lincocin®

(lincomycin hydrochloride monohydrate, Upjohn)

and single-dose 2 ml.
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...



1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49001

When irritable colon feels like this

The blowfish, a small species of fish, reacts to stress or fright by puffing itself up wit air. After about a dozen noisy gulps the belly is balloo shaped and hard. When replaced in the water the air quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

INDEX TO ADVERTISERS

Arch Laboratories 456

Blue Cross-Blue Shield 457
The Bradley Center ..... 3rd Cover
Breon Laboratories 431
Bristol Laboratories 436, 437, 452, 453
Burroughs Wellcome 473

Campbell Soup 447
Classified 436, 446, 461

Geigy Pharmaceuticals 423

Highland Hospital 464

Lederle Laboratories 484
Eli Lilly & Company ..... 1st Cover, 438

Medicenters of America 460
Wm. S. Merrell 427

National Drug 433, 434, 465, 466

Wm. P. Poythress 470

A. H. Robins 468, 469

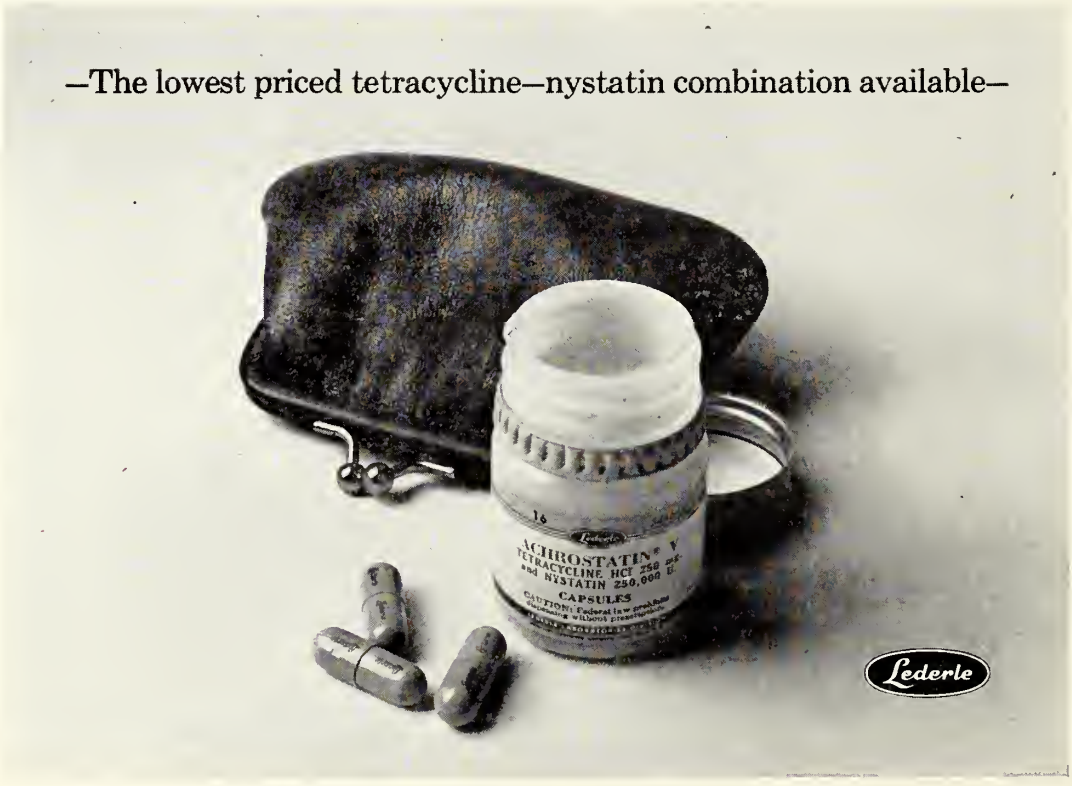
Roche Laboratories ..... 2nd Cover, 421, 425, 428, 429, 474, 475, 476, 480, 4th Cover

G. D. Searle 448, 449
Stuart Pharmaceuticals 450, 482, 483

Upjohn Company 481

Warner-Chilcott 458, 459

—The lowest priced tetracycline—nystatin combination available—



The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

for the patient ruled by anxiety

Librium®

(chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, please consult complete product information, o summory of which follows:

Indications: Indicoted when onxiety, tension and opprehension are significont components of the clinical profile.

Contraindications: Potients with known hypersensitivity to the drug.

Warnings: Caution potients about possible combined effects with olcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazordous occupotions requiring complete mental olertness (e.g., operoting machinery, driving). Though physical ond psychological dependence hove rarely been reported on recommended doses, use caution in odministering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smollest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, corefully consider individual phormocologic effects, particularly in use of potentioting drugs such as MAO inhibitors and phenothiazines. Observe usuol precautions in presence of impaired renol or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and ocute rage) hove been reported in psychiotric patients and hyperactive oggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies moy be present and protective measures necessory. Vorioble effects on blood coagulation have been reported very rarely in patients receiving the drug ond oral onticoagulants; causal relationship has not been estoblished clinicolly.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly ond debilitoted. These ore reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ronges. In a few instances syncope hos been reported. Also encountered are isolated instonces of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased ond decreased libido—all infrequent ond generally controlled with dosoge reduction; changes in EEG potterns (low-voltage fost octivity) moy oppear during ond ofter treotment; blood dyscrosios (including agronulocytosis), joundice ond hepotic dysfunction hove been reported occosionally, moking periodic blood counts ond liver function tests odvisoble during protrocted theropy.

Roche LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

JOURNAL

of the Medical Association of the State of ALABAMA

FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
24 FEB 1971

IN THIS ISSUE

Encomium - Samuel Buford Word 492

Common Misconceptions in Inhalation Therapy Part II, "Particulate Water" 503

Francis A. Countway Lib. of
Medicine
10 Shattuck St.
Boston, Massachusetts 02115

FEBRUARY 1971

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
FEB 1971

His wife has a lot of different menopausal symptoms, but only a few really irritate *him*. Her hot flashes, her vertigo, her palpitations—that's *her* problem. What really bothers him is her nervousness, her irritability and her excessive anxiety, often expressed by endless "book-shuffling, chain-smoking, reading-lamp" insomnia!

Menrium takes care of hot flashes, vertigo, palpitations in most menopausal women. Menrium provides the well-known antianxiety action of chlordiazepoxide (Librium®) and water-soluble esterified estrogens. It therefore relieves more symptoms than either component separately. It takes care of the vasomotor symptoms as well as the emotional symptoms. This means the symptoms that bother his wife most. And the symptoms that irritate him most.

So, to help them both get through *her* menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • February, 1971 • No. 8

Office of Publication
19 So. Jackson St. .... Montgomery, Ala. 36104
Subscription Price ..... $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. ..... Montgomery

Managing Editor
L. P. Patterson ..... Montgomery

Assistant Managing Editor
Mary Nell Williford ..... Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman .. Montgomery
C. Kermit Pitt, M. D. ..... Decatur
H. H. Hutchinson, M. D. ..... Montgomery
William L. Smith, M. D. ..... Montgomery
L. P. Patterson ..... Montgomery

Officers of the Association

President
O. Emfinger, M. D. ..... Union Springs

President-Elect
A. E. Thomas, M. D. ..... Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. ..... Brewton
J. E. Cameron, M. D. ..... Alexander City
Wood S. Herren, M. D. ..... Birmingham

Secretary-Treasurer
William L. Smith, M. D. ..... Montgomery

Executive Director
L. P. Patterson ..... Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. ... Decatur
J. P. Collier, M. D. ..... Tuscaloosa
Paul W. Burleson, M. D. ..... Birmingham
L. L. Hill, M. D. ..... Montgomery
M. Vaun Adams, M. D. ..... Mobile
J. D. Bush, M. D. ..... Gadsden
E. L. Strandell, M. D. ..... Brewton
John W. Davis, Jr., M. D. ..... Montgomery
J. Garber Galbraith, M. D. ..... Birmingham
H. G. Hodo, M. D. ..... Fayette

State Health Officer
Ira L. Myers, M. D. ..... Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1971
Delegate—M. Vaun Adams, M. D. ..... Mobile
Alternate—E. L. McCafferty, Jr., M. D. ..... Mobile
Delegate—P. W. Burleson, M. D. ..... Birmingham
Alternate—Robert Parker, M. D. ..... Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. .. Fairfield
Alternate—W. E. White ..... Anniston

CONTENTS

President's Page 488

Woman's Auxiliary Page 490

Encomium—Samuel Buford Word 491

Editorial Comment 492

What Is Death? Medicine Must Write The Answer 492

And Whose Shoulders Bear The Responsibility? 492

Guest Editorial—Mental Health Services and the General Hospital 496

Scientific Section 503

Common Misconceptions in Inhalation Therapy, Part II, "Particulate Water," D. S. Tysinger, Jr., M. D., Dothan 503

Physician Placement Service in Alabama 515

Around the State 519

Vital Statistics 519

Hobbies To Fill A Doctor's Leisure 534

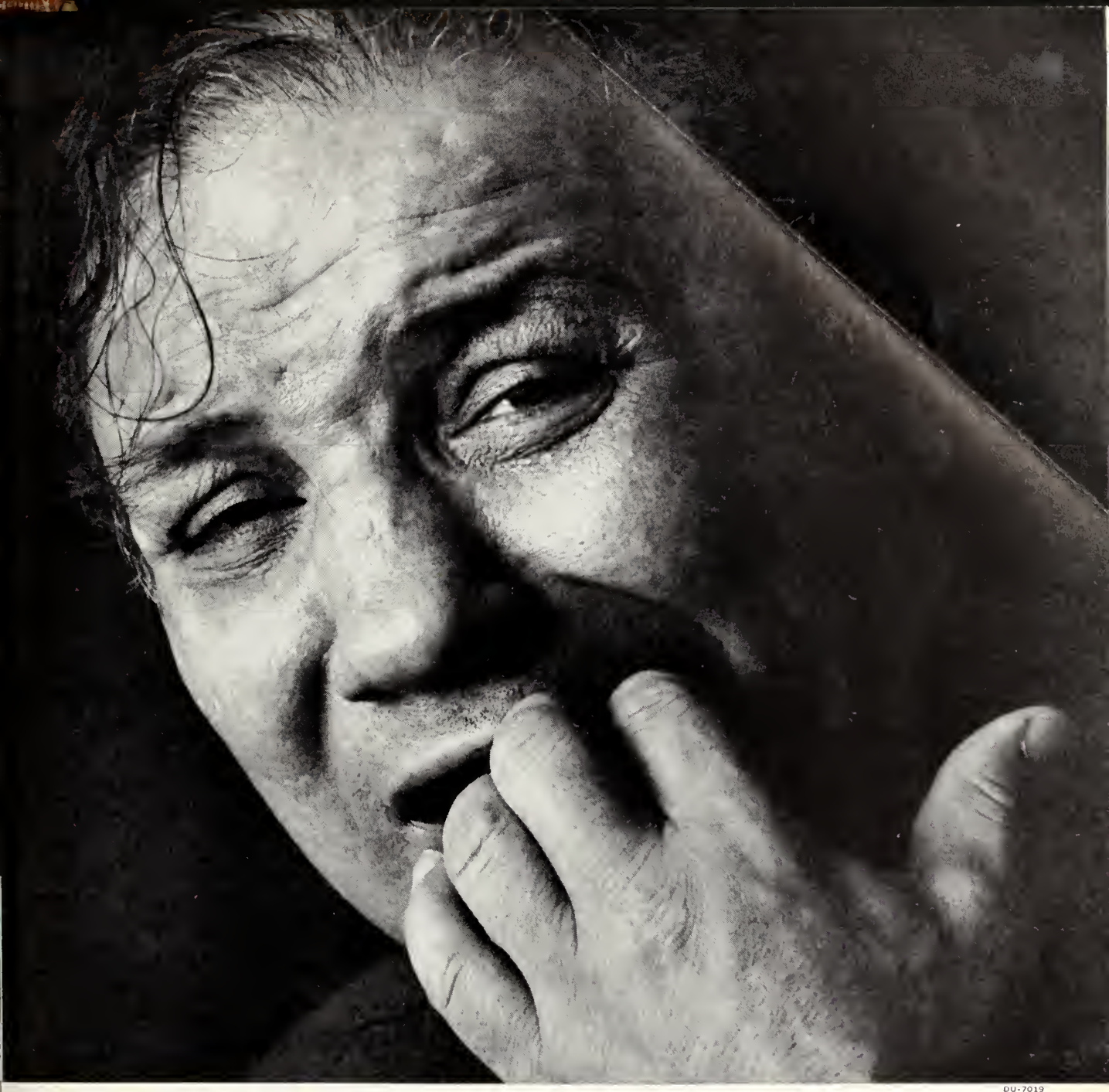
If It's A Muzzle-Loader, You Need It Here 534

Legal Page: Patients Refusal to Cooperate with the Physician 539

Alabama Department of Public Health 540

Hepatitis Test Still In Developmental Stage 540

The Month in Washington 546



DU-7019

Who's afraid of the big bad enema?

We all are. But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can – except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents", and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable

bisacodyl

President's Page

O. Emfinger, M. D.

It is 7th January 1971 and this morning I attended the funeral of Dr. Buford Word, President of the Medical Association of the State of Alabama, held in Birmingham, Alabama. The remarks of Dr. Denson Franklin, Dr. Word's pastor, were so appropriate that I felt that all members of the Medical Association of the State of Alabama would benefit by reading what Dr. Franklin had to say. For several issues I have been writing the President's Page because of Dr. Word's inability to do so because of illness. Now, in memory of Dr. Word, I give you the following message from Dr. Denson Franklin, pastor, Canterbury Methodist Church, Birmingham, Alabama.

"Words are merely tools with which we carve our thoughts on the minds and hearts of others. How can one find words to eulogize Buford Word? And what man is capable or worthy to bring such eulogy? Certainly not this minister.

"You know the many honors which were bestowed upon him and I will not reiterate them. I want this statement not to be just the words of his minister, for I have had this privilege only seven months. Rather I want to give a personal witness as a close friend for years.

"Dr. Word and I were trustees of Birmingham-Southern College and served on the Governance Committee. We have spent hours together wrestling with the problems of modern youth. I speak now as a friend who knew him 'man to man' in facing the problems of every day life.

"The late Dr. Luccock of Yale once said: 'We have learned to fly through the air like birds and to swim under the sea like fish, but we haven't learned to walk the earth like men.' Buford Word had learned to walk the earth *like a man.*

"There was a simplicity and yet a depth about this man. He was one of the best read men I have known, yet he knew human nature and was always interested in people and in the service of his fellow man.

"May I use three words in this brief eulogy.

"1. DIGNITY

"Harry Golden, journalist and wit once said: 'A person can go without food longer than he can go without human dignity.' Buford was a person of dignity. He wanted things done in good taste and with good manners. He lived in dignity and died with dignity. He remembered the challenge of Dr. Guy Snavely, President of Birmingham-Southern, who called on the boys to always be 'cultured, Christian gentlemen.' Buford was just that.

"2. DUTY

"Someone has said, 'Duty is the sublimest word in the English language.' Buford would ask the question, 'Is it right?' and then 'Is it my duty?' Then he would give himself to it without reservation. He carried with

him at all times a deep sense of responsibility.

"3. DEDICATION

"One has only to ask his patients, his family, his fellow doctors, his friends and his church about dedication to learn that this man lived a dedicated life. He was dedicated to his profession and to his patients. He was dedicated to his family. The closeness of this family impresses all who know them. He was dedicated to his country and served America well in war and in peace. He was dedicated to his church, the Canterbury United Methodist Church, where he held most every high office. Some have called him 'Mr. Canterbury.' He was dedicated to his God through personal faith. Like the man in the first Psalm, 'he was like a tree planted by the rivers of water who bringeth forth his fruit in his season.'

"Yes, Buford Word has walked the earth like a man, a child of God. And he has left behind large footprints upon the sands of time which will challenge us all during the days ahead."

O. Emfinger, M.D.

O. Emfinger, M. D.
President
The Medical Association
of the State of Alabama

Canadian MD's Income Rises

Average income of a Canadian fee-for-service physician was $38,675, according to 1968 statistics released by Canada's Health and Welfare Department. This figure represents an increase of nearly 10 percent over the previous year and is the highest in a 10-year period. Average net income amounted to $26,093 in 1967, up 12 percent from $23,262 in 1966, according to the report.

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the Medical Association of the State of Alabama. I will support its activities, protect its reputation and ever sustain its high ideals."

I am pleased to report that the Medical Association's Committee on Medical Aspects of Traffic Safety and the Medical Advisory Committee to the Driver's License Division, State Department of Public Safety had a called meeting to consider the Woman's Auxiliary's Trustee approved project of having space provided on drivers' licenses for Emergency Medical Information. Though this information would be on a voluntary basis, a photograph for positive identification would be mandatory thus requiring State Legislative action.

I was invited to attend this meeting as was State Representative Walker Hobbie; Mr. Richard O. Payson, Governor's Coordinator of Highway Safety; Lt. Ralph Beasley, and Captain J. K. Adams, Driver's License Division.

After discussion by all present, it was felt the project has great merit, and the Committee endorsed the inclusion of photographs and Emergency Medical Information on drivers' licenses. State Representative Walker Hobbie will write the necessary bill, and submit it to the Medical Association's Legislative Committee, Board of Trustees, and Board of Censors for approval before formally presenting it to the State Legislature.

It is also the desire of this Committee on Medical Aspects of Traffic Safety that a periodic vehicle inspection program be instigated. Reports from other states indicate traffic accident fatalities decreased some 15 per cent after such a program was put into effect.

The Auxiliary has long felt that though our "Service to Others" projects reach many, many people, they are done on County Auxiliary levels, and there was a great need for a state-wide level project to benefit more people of our state. I sincerely appreciate Dr. Upchurch and his Committee's in depth study, deliberation, and endorsement of the Emergency Medical Information project.

Mrs. Howard C. Johnson

Camille Johnson

Camille Johnson

Encomium
Samuel Buford Word

On Monday, January 4, 1971, the medical profession lost a valued member, a beloved friend, an internationally known obstetrician, gynecologist, an entertaining lecturer and a dedicated teacher.

Buford Word, an Aberdeen, Mississippi native, lived and worked in Birmingham for 33 years. Arriving in Birmingham fresh from the country, he attended Birmingham-Southern College where he graduated in 1931. He graduated from the Louisiana State University School of Medicine in New Orleans and served his internship at Charity Hospital in the Crescent City. From 1940 to 1946, he served in the Army Medical Corps and returned home a full commissioned colonel in the Army Reserve.

Since beginning his practice in Birmingham in 1937, Buford has been active in medical and civic affairs. He was a Past President of the Birmingham-Southern Alumni Association and has headed several fund drives for the college. He was for many years a member of the Board of Trustees of Birmingham-Southern College.

Among the many positions he has held in medical circles was Chairman of Jefferson County Board of Health; member of the Jefferson County Medical Society, the Medical Association of the State of Alabama and the American Medical Association since 1937; 1961 President of the Jefferson County Medical Society; member of the Board of Trustees of the Medical Association of the State of Alabama; member of the J C M S Board of Censors; secretary, and then chairman of District Seven of the American College of Obstetricians and Gynecologists; Counsellor of the Southern Medical Association and had served on the faculty of the University of Alabama in Birmingham's School of Medicine since 1946.

The Samuel Buford Word annual lectureship was recently established in his honor by the Department of Obstetrics and Gynecology, University of Alabama Medical College.

Dr. Word had served ALAPAC since its inception and was the 1970-1971 President of the Medical Association of the State of Alabama until his illness forced his resignation.

Buford was a widely sought speaker and taught annually at a summer seminar in North Carolina. At any gathering of obstetricians and gynecologists one was always asked, "Where is Buford? Isn't he on the program?" Panel member, discussor or lecturer, he was always counted on and could be depended upon for both humor, common sense and good advice.

As a citizen he became involved in community affairs by serving on the Board of the Community Services Council; as Chairman of the administrative board of the Canterbury United Methodist Church; as President of Vestavia Country Club; numerous committees and fund drives.

He will be sorely missed by all his colleagues and his patients who knew and loved him—not for what he achieved for himself, but what he has contributed to mankind, his community and organized medicine.

The Medical Association of the State of Alabama expresses its profound regrets in this great loss to his surviving widow, his five sons, his daughter and his three brothers.

—Walter P. Batson, M. D.
Jefferson County Medical Society

'What Is Death?' Medicine Must Write The Answer

". . . but the patient died."

What is death? Our forefathers—whether medical, lay or spiritual—were very sure of the answer to that question. They could answer as does the Medical Dictionary:

"A state of complete and irreversible cessation or absence of bodily processes, such as respiration and circulation, leading ultimately to dissolution of the organism."

Those who watched the confidence with which a physician approached the death chair at Kilby to examine the occupant, after a lethal charge of electricity had been sent through his body, knew that this doctor would render an unqualified verdict of life or death.

Nearly everyone will be a little amused by the following paragraph published in an encyclopedia copyrighted just 23 years ago:

"Reports from the Soviet Union have indicated that scientists there have been able to restore life to dead human beings. This, of course, could not be done if death had affected the tissues of the brain. In any case the person's heart could not have stopped beating for more than a few minutes."

We have come a long way since then. And it is everywhere apparent that our definitions —lay, legal and medical—are changing. As a matter of fact the Legal Page of this magazine devoted an entire article to the fact, underscoring developments in life-supporting techniques and in organ transplants.

What is death? It is a moot question today, a hypothetical case open for argument. But be very sure of one thing:

When the answer is written, medicine must write it.

And Whose Shoulders Bear The Responsibility?

Surgery and sentiment are poor mixers.

To generalize, the more successful operations are performed by teams that are competent, cool and detached. Only under extreme circumstances is a patient's surgeon a member of the immediate family—a husband, a brother, a father, or a son.

To a lesser degree, sentiment is involved in charity cases. The old fashioned doctor who allowed unlimited calls from non-paying patients almost always wound up in an early grave. The others usually appreciated the appeal, but they recognized the greater responsibility to their regular patients, their families, and themselves.

The restraints of responsibility are something the average politician doesn't have to worry about. He can set up programs for medical care of the aged or the indigent,

(Continued on Page 496)

The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.

Because diarrhea with cramping, nausea, and painful straining can strike at the most inopportune time, it takes a comprehensive agent to treat the total diarrheal syndrome and help get the patient back on the job. That's why so many physicians rely on Donnagel, especially during the fall and winter months when "flu" and viral gastroenteritis usually hit their peak.

Donnagel is much more than just a simple kaolin-pectin combination. It also contains the belladonna alkaloids to calm GI hypermotility and help relieve the distressing discomforts which so often accompany diarrhea. Certainly it's less expensive and more convenient than taking two medications. And the dosage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies everywhere on your prescription or recommendation.

When diarrhea and its discomforts separate a man from his job . . .

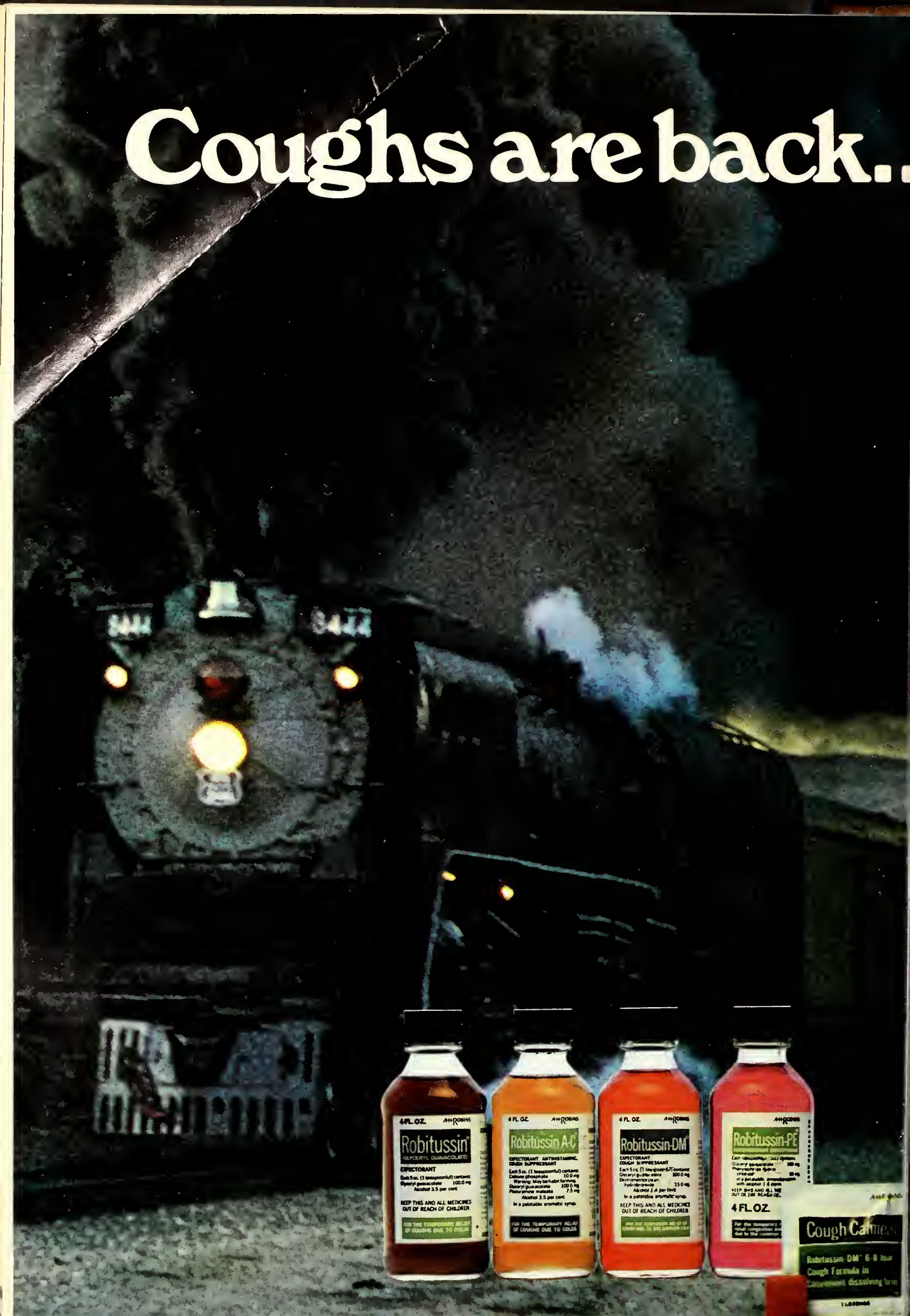
Donnagel®

Each fluid ounce contains: Kaolin, 6 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A·H·ROBINS

A. H. Robins Company,
1407 Cummings Drive,
Richmond, Va. 23220

Coughs are back...



clear the tract with the

Robitussin® Line

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

Robitussin®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Alcohol, 3.5%	

For unproductive allergic coughs

Robitussin A-C®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.
(warning: may be habit forming)	
Alcohol, 3.5%	

Non-narcotic for 6-8 hr. cough control

Robitussin-DM®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Dextromethorphan hydrobromide	15.0 mg.
Alcohol, 1.4%	

Clears sinuses and nasal stuffiness as it relieves cough

Robitussin-PE®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Phenylephrine hydrochloride	10.0 mg.
Alcohol, 1.4%	

Robitussin-DM in solid form for "coughs on the go"

Cough Calmers™

Each Cough Calmer contains:

Glyceryl guaiacolate	50.0 mg.
Dextromethorphan hydrobromide	7.5 mg.

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

Robitussin® extra benefit chart

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.

	Cough Suppressant	Antihistamine	Long-Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
ROBITUSSIN®					●
ROBITUSSIN A-C®	●	●			
ROBITUSSIN-DM®	●		●		●
ROBITUSSIN-PE®				●	●
COUGH CALMERS™	AHR		AHR		AHR

A. H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

(Continued from Page 492)

and let the doctors worry about the success or failure of the plans.

Apropos of which is the AMA newsletter item that follows:

"A cutback in Medi-Cal that would generally limit benefits to emergency services was protested by the California Medical Association. The California Medicaid program faces a $200-million deficit this fiscal year.

"In a letter to the State Department of Health Care Services, CMA President Ralph W. Burnett, M. D., said the crisis was 'caused by a budget that was unrealistic at the outset and has been vastly compounded by short-sighted estimates of the increase in Medi-Cal caseload, which is up 35% over last year.' He said: 'Our primary concern today is the same as it was in 1965 when CMA worked for the adoption of Medi-Cal: bringing to the poor the same high quality, mainstream-medicine available to the less disadvantaged . . .

" 'The physician continues to bear the burden of responsibility for patient care, but the new regulations take away his freedom to treat his patients according to his best medical judgment.'

"At a press conference announcing the cutbacks, Gov. Ronald Reagan said it would be 'unfounded and contrary to the facts' to blame physicians for the Medi-Cal crisis. 'Doctors and others generally have had to absorb the effects of inflation . . . The truth is the taxpayers owe most of them a debt of gratitude. Now we must ask them to again pull in their belts.' The regulations, scheduled to go into effect" (immediately) "would slash by 10% the already substandard fees paid to physicians and all other providers (except inpatient hospital services)."

And if the individual physician rebels, whom do you think the average California citizen will blame?

GUEST EDITORIAL

Mental Health Services And The General Hospital

In 1958, the president of the American Psychiatric Association predicted the imminent demise of the large mental hospital. His opinion was that the inhumanity of removing the mental patient from his community and incarcerating him in a custodial institution was not only inexcusable from a humane point of view, but also very bad psychiatry. He saw the large mental hospital as an unnecessary holdover from earlier times—totally out of keeping with modern means of communication, transportation and half a century of advances in the field of mental health.

Many professionals whose careers were tied to the old system were quick to protest. They called Dr. Solomon unrealistic, unknowledgeable in psychiatry, ignorant of the facts and a traitor to his field. "Where," they asked, "will all the patients go?"

During a recent consulting visit in Alabama, Dr. Solomon admitted that perhaps he had erred in 1958—but only as to the time table. He was able to point with pride to the fact that in areas with progressive programs the large hospitals are indeed being emptied. New treatment approaches in the hospitals coupled with an enlightened public—no longer threatened by mental illness—have changed many of the large "human warehouses" into small intensive treatment centers.

These changes have been of major importance in the decade of the '60's; however, the title of this guest editorial gives a clue

to where the action will be in the '70's.

I commend to your careful attention the 1970 publication of the American Hospital Association entitled, *Mental Health Services and the General Hospital.*

Edwin L. Crosby, M. D., Director of the Association sets the keynote in the Foreword:

> "In recent years great strides have been made toward the recognition of mental health care as an integral part of comprehensive health care. Even g r e a t e r strides are necessary, however, if we are to meet the challenge of providing, in each community, mental health services to the right people, in the right combination, at the right time and place.
>
> "Accomplishing this goal will require the combined efforts of all concerned in developing a dynamic, innovative delivery system that is continually evaluated and modified; in creating a demand for, and understanding of, mental health services; in encouraging increased financial support for mental health care; and in working for local, state, and federal legislation that will more realistically reflect m o d e r n practice relating to patients with acute mental illness."

In 1966 at a conference conducted by the American Hospital Association in cooperation with the American Psychiatric Association and with the sponsorship of the National Institute of Mental Health, a recommendation stated:

> "Every general hospital should have a written mental health service plan for the recognition and management of acute and ongoing emotional problems.
>
> "Every hospital, in aiming toward optimum health services, has an obligation to be concerned about the psychosocial aspects of all its medical care programs These recommendations were subsequently reinforced by the revised standards of the Joint Commission on Accreditation of

(Continued on Page 498)

medicom

The keys to your financial well-being are buried somewhere under tons of information.

And you don't have time to look for them.

Medicom does.
And does.

By cassette tape, each month Medicom will present a panel of qualified experts discussing the business side of your practice. On the other side a concise and authoritative review of current financial information.

Boiled down to essentials and condensed into about 20 provocative minutes of dialogue and discussion on each side of a cassette tape Medicom can give you enough insight into current topics to raise pertinent questions of your own about your economic security. The cost is nominal.

Write today for information and a sample tape.

To: MEDICOM,
10409 Lovell Center Drive
Concord, Tennessee 37720

(Continued from Page 497)

Hospitals, which require hospitals to have a written plan for the care or referral of persons needing mental health services. The standards state:

"There should be a written plan for the care and/or for the referral of patients who are emotionally ill, or who become emotionally ill while in the hospital, as well as for the care and/or appropriate referral of persons who suffer the results of alcoholism or drug abuse."

Appendix A, "Statement on Admission to the General Hospital of Patients with Alcohol and Other Drug Problems," makes it clear that the general hospital definitely has the responsibility to be involved in the treatment of acute alcohol and drug episodes, but also in the development of rehabilitation services required by the alcoholic and the drug addict. The health insurance industry is moving in this same direction. For example, the Blue Cross Association, has eliminated discriminatory clauses excluding coverage for mental illness, alcoholism, and drug addiction from its national contracts.

Appendix B, "Statement on the Hospital's Responsibility for the Psychological Aspects of Health Care," is worthy of careful study by every physician in Alabama. The closing paragraphs of this statement bear repeating:

"Recognition of the human dimensions of medical care services enhances the quality of patient care, tends to promote comprehensive health care, and can improve employee morale by increasing the employee's sense of his own worth and his confidence in his ability to serve.

"The American Hospital Association believes that all hospitals have an obligation to examine their present policies and practices in the light of the need to 'give care while caring.'"

There will be a continuing need for the

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Associate Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

private, state and federal mental hospitals. Indeed, each of these primary mental health resources are moving toward increasing delivery of services in the community. For example, Bryce and Searcy Hospitals have recently established the Unit System of operation on a geographic catchment area basis. This important change will improve immensely their program throughout the state. The Tuscaloosa VA Hospital is entering into a five-year demonstration project on the delivery of mental health services to the veteran in the community—the only project of its kind in the VA system. Hill Crest Hospital, a private facility, has an expert on Community Psychiatry on its staff and is actively involved in promoting community mental health.

The importance of these involvements is great; however, far overshadowing in the '70's will be the realization that every citizen should be able to obtain a full range of treatment in his local community. This, at long last, will include Mental Health Services in the General Hospital.

JAMES C. FOLSOM, M. D.
Hospital Director
Veterans Administration Hospital
Tuscaloosa, Alabama

Fighting Trauma

An all-out battle on the effects of accidental injury is being launched at Yale University. The new "trauma program," supported by a $2-billion grant from the Commonwealth Fund, will investigate the total spectrum of emergency action, including on-the-scene communication systems and medical techniques required in the care of the trauma patient. Accidental injury is now considered the number one cause of death in the U. S. during the first half of the normal life span.

—S. Dakota Journal of Medicine

medicom

Rx: Take one as directed for head congestion.

Medicom: For relief of financial Paranoia.

Once a month, set aside 40 minutes to listen to one Medicom Cassette tape.

Medicom is a concise and authoritative source of current financial information.

Gathered from many experts and recognized financial sources over a month's time and condensed into minutes of dialogue and discussion on tape.

These 40 minutes a month spent with Medicom (during breakfast, driving to the office, etc.) can give you enough insight into the business side of your practice and current business and financial subjects to raise pertinent questions of your own about your economic security.

Questions you can then bring to the attention of your advisors.

Medicom is easy to swallow.
And nominal in cost.

Write today for information and a sample tape, to:
Medicom, 10409 Lovell Center Drive, Concord, Tennessee 37720

relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

Health Care Explosion In Making

What began six years ago with "the noblest of intentions," says a California Medicine editorial, has generated a disturbing chain reaction in health care legislation, and there is threatening disaster on the horizon.

"Chain reactions," says the editorial, "whether they are atomic or legislative, tend to be self-perpetuating, and unless they can be controlled or contained they have the potential of becoming explosively destructive . . . There is little to suggest that this chain reaction of federal health care legislation is either controlled or contained."

In a kind of desperate effort to control the ever rising costs which are largely the result of earlier poorly conceived legislation, the Congress is now being asked to place its bets upon the concepts of the Health Maintenance Organization (HMO) and the Professional Standards Review Organization (PSRO).

California charges that these proposals have been developed with little objective research and less provider participation, and so are "certain to be relatively ineffective in achieving their purpose . . . thus emphasizing the disparity between theory and practice."

"It is hard to avoid concluding," concludes the editorial, "that the potential for an explosively destructive situation may now be in the making."

Artistic growth is, more than it is anything else, a refining of the sense of truthfulness. The stupid believe that to be truthful is easy; only the artist, the great artist, knows how difficult it is.

—Willa Cather

medicom

Medicom: A service which measures its effectiveness in terms of questions raised, not answered.

Medicom's not a financial advisor.

Our function is to give you enough insight into the business side of your practice and current business and financial subjects to raise pertinent questions of your own about your economic security. Questions your advisors can then explore and evaluate with you.

By cassette tape Medicom will present a panel of qualified experts discussing the business side of your practice.

When we achieve this objective, we provide a service well worth the nominal cost of Medicom.

For full information and a sample tape write:

Medicom, 10409 Lovell Center Drive, Concord, Tenn. 37720

Not too little, not too much... but just right!

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone Liquid 250

Erythromycin Estolate
(equivalent to 250 mg. of base per 5-ml. teaspoonful)

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Lilly

100204

THE JOURNAL
of
THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
Published Under the Auspices of the Board of Censors

Volume 40 February, 1971 Number 8

Common Misconceptions In Inhalation Therapy

Part II "Particulate Water"

D. S. Tysinger, Jr., M. D.
Dothan, Alabama

In Part I, water in the state known as humidity was discussed. When there is a sufficient water surface area for molecular escape, air will be saturated. Over an ocean the air is almost 100 per cent saturated. Over a desert the air is dry. Humidity is water that stays in the air. It has no part in moistening or giving water to the lungs. It is water that must be present to keep air from taking water from the lungs and thickening the secretions.

If the air is to put moisture into the lungs, humidity will not directly do anything to help. Water must be put into the air. Water must be added in larger than molecular size. This is particulate water and can range from two-three molecules together to a bucketful dumped from some height which falls straight down. The small particules float in air better than water by the bucketful. It is important to understand why.

Air is a fluid. Air follows the laws of fluids. Since fluids are divided into liquid and gas, air also obeys all the gas laws. Air is a true gas since its critical temperature is -140°C and it is not liquifiable above this temperature.

Archimedes demonstrated some years ago that a body floating in a fluid would displace its own weight of fluid. Water particles are floated in air just as a wooden boat floats in a river. It displaces its own weight of the fluid. The property of air that causes this is the density, that is, the number of molecules per unit of space. Cold air has less energy, the mean free path is shorter and, therefore, there are more molecules per unit-space with a lower pressure and a higher density. Thus, cold air will carry more and larger particles than hot air. (Charles' Law, Boyles' Law, Abogadro's Law, etc.) As heat is applied to a gas the kinetic energy is increased, the mean free path is increased, and the molecules move farther apart. Then, there are fewer molecules per unit space with a higher pressure and lower density. Therefore, this air will carry less. It was learned in Part I that water vapor is lighter than air. Thus, moist air is less dense than dry air. See Table II, which depicts dry and moist air densities at room temperature and at body temperature.

TABLE II

DENSITY OF AIR AT STANDARD PRESSURE (29.92"Hg)
GRAMS PER LITER

TEMP	DRY	SATURATED
22°C	1.2929	1.2837
37°	1.1387	1.1123

There are many methods of producing particulate water in the air. Probably the oldest is that of steam. Since water vapor at boiling point occupies 100 per cent of the available space (displaces all air) it does not exist long without cooling so that air again mixes with the water vapor. As the air cools, moisture condenses due to falling dew point. Steam condenses to water particles the same as clouds form, only faster. The water vapor first starts to condense around particles in the air called condensation nuclei. The condensation nuclei are roughly 0.4 micron. These are dust, etc., in the air. Water leaves the vapor state and collects around the nuclei, the first particles formed are called "cloud particles" (smallest produced this way) which are 1/10,000 of an inch or 2.5 microns. Thus, the smallest water particles obtained from hot steam are due to this rapidly dropping dew point, and the particles size is 2.5 microns. (Mechanical equipment can produce particles smaller in size.) These particles act as the original condensation nuclei and get larger as dew point continues to fall precipitously until the air is saturated with particles. Thus, there are many sizes of particles from 2.5 microns up. As the air becomes saturated with particles more and more water particles collect into very large particles. (It should be remembered that hot air will not hold many particles compared to cold air.) As the particles get larger and larger they fall out faster following Stokes' law. Much of the water thereby produced in particulate form (roughly ½) rapidly increases to particle size of 50-70 microns and over. If the steam is augmented by introducing particles mechanically into the hot steam the air is so very light very little will remain. Those that do remain act as cold condensation surfaces and cause water to collect much faster so that very little more actually is delivered by this addition of particles and the particles get huge rapidly and thus fall straight down. (Stokes' Law) The cloud particles size water drops (2.5 microns) which are the smallest forming, will double with every 20°C drop in temperature. A "hot pot" run at 87 C (190 F) producing particles, the smallest of which is 2.5 microns, must drop to 37 C or a 50 C drop in temperature. Thus, the first particles produced will be ten microns or more at body temperature, these being larger particles due to the larger surface areas on which water can condense. With this method of particle production, immediately following production of the particles, "particle growth" starts. Particle growth occurs at a very rapid rate due to the rapidly cooling situation.

The number of particles carried is determined by the temperature at which air and water with particles leaves the nebulizer. Hot moist air carries very much less than room air or air at body temperature. The water that condenses is due to falling dew point and condensation of the water in the air as humidity. Since humidity is a very small amount as was noted in Part I, after the initial particle formation which starts at 2.5 microns (the smallest produced as the air cools and dew point falls) particles are much fewer and the humidity rains out on the existing particles so the number of particles does not increase. The increase is in particle size. The results include larger particle size, fewer particles, and humidity of 100 per cent. By nebulizing particles into the heated mist, the particles are cooled by 20°C or more in the process of nebulizing and thus act as cold surfaces. The particles, usually 1-5 microns in size, which are usually below dew point cause water vapor to collect and thus grow larger. The particles of five microns with the larger surface area get 25 times as much water added as the smaller ones of one micron and thus grow 25 times faster.

By now it should be appreciated that heated steam produces smaller particles size than does a heated nebulizer. Both particles grow at extremely rapid rates. Thus water delivery from these types of equipment is far better than nothing, but very much short of what any standard cold nebulizer will produce. It needs to be emphasized also that particle size is unpredictable in heated situa-

tions other than the generalization that they are very large.

For the production of particles in cold solutions there are several methods. Blowing air through, or bubbling air through, a solution at a high rate of speed causes particle production. Shaking a solution vigorously (ultrasonic) causes small particles to be shaken loose which are very uniformly equal. Also, larger aggregates form at an unpredictable rate. Both of these methods produce sprays of particles. The first is rather unpredictable; the second depends on rate of shaking. Vigorous high speed shaking produces small particles usually as small, or smaller than, condensation nuclei. It is hard to produce particles of cloud particle size or larger with vibration (sound).

When particles are produced by any of these methods heat is required and work is done so that air is cooled below room temperature by about 15°-20° C. Unlike the hot particles, these particles warm up to room temperature and then to body temperature. (Being cold three times as many start out as with heated pots.) The huge particle surface area could be likened to an ocean on which the molecular escape causes air to be 100 per cent relatively humidified. This molecular escape causes particles to become smaller, "particle degradation." Also, if they contain medication they become more concentrated. It should be remembered, then, that cold-produced particles are, by rule of thumb, three times as numerous as with hot pot production, get smaller as they approach the airway, and concentrate whatever they are delivering as they get smaller. Humidity remains 100 per cent relative humidity all the way. This can be demonstrated by putting a mirror in the spray from the nebulizer. It will fog up the mirror due to dew point changing and causing water to condense on the mirror. This can also be demonstrated by putting a hygrometer (wet-dry thermometer) in the spray and measuring the humidity which will show 100 per cent. Diagram No. 3.

The particles produced by sound (ultrasonic) are regularly demonstrated not to fog up a mirror. This means they are not producing 100 per cent relative humidity. This can be supported by measuring the relative humidity in the plume from the ultrasonic nebulizer. It will fluctuate and show varying degrees of relative humidity up to, and occasionally but not routinely, 100 per cent relative humidity.

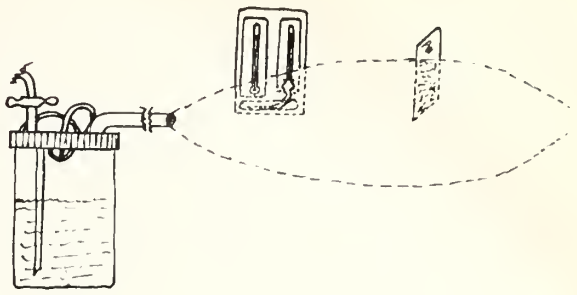


Diagram 3

The most predictable nebulizer for particle size is the atomizer which employs Bernoulli's principle (capillary tube, fluid containers, ball and air jet). These can be designed for fluids of varying cohesive and adhesive forces and specific gravities and which deliver quite reproducible and predictable particle size.

Why so much talk of particle size? Because particle size and particle stability determine particle and thereby medication and water, delivery. Some facts on particle size might be summarized in the following statements. If one is breathing through the nose, all particles over five microns are removed from the air. Below this size more and more are passed to the tracheobronchial tree. When the mouth is open particles over ten microns do not enter the tracheobronchial tree and five microns and over do not pass the secondary bronchi level. Particles between 2-4 microns transverse the tracheobronchial tree to varying degrees to the 1 mm bronchus. Particles above 1.2 microns do not enter the alveolus. Particles 0.2 micron and smaller readily enter the blood stream. So, particle size is very important in delivering to various parts of the tracheobronchial tree. If the particle size is

not right, no matter what the circumstances, good delivery cannot occur.

TABLE III

PARTICLE SIZE	RATE OF FALL STOKES LAW
.1 micron	0.0008 mm/sec.
.2 micron	0.0018 mm/sec.
0.3 micron	0.0034 mm/sec.
0.4 micron	0.0065 mm/sec.
0.5 micron	0.0093 mm/sec.
0.6 micron	0.012 mm/sec.
0.7 micron	0.018 mm/sec.
0.8 micron	0.022 mm/sec.
0.9 micron	0.028 mm/sec.
1.0 micron	0.036 mm/sec.
2.0 microns	0.15 mm/sec.
3.0 microns	0.30 mm/sec.
4.0 microns	0.40 mm/sec.
5.0 microns	0.78 mm/sec.
6.0 microns	1.2 mm/sec.
7.0 microns	1.5 mm/sec.
8.0 microns	1.9 mm/sec.
9.0 microns	2.5 mm/sec.
10.0 microns	3.0 mm/sec.

Stokes Law, from the meterological tables of the Smithsonian Institute for water at standard temperature and pressure.

Particle stability and "rain out" are very important. Normally produced particles from 0.1 to 70 microns follow Stokes' Law. (Table III, for water standard temperature and pressure, from Smithsonian Meteorological tables, presentation of Stokes' Law.) From this it is seen that particles of 0.1 micron fall at 0.0008 mm/sec. and for such a particle to fall 1 mm 1,000 seconds, or roughly 17 minutes, are required. A particle 0.5 micron falls at 0.0093 mm/sec. or it would fall 1 mm in two minutes. A particle 1.0 micron in size falls 0.036 mm/sec. which again requires around ½ minute to fall 1 mm. A particle five microns in diameter falls 0.78 mm/sec. which means that in 1 1/3 second it would fall 1 mm. A ten micron particle falls 3 mm/sec. Thus, when these particles are dispersed into the nose and mouth there is a good explanation why the 5-10 micron diameter particles do not get very far. Raining out particles in the lungs follow a more complicated pattern than this and will be gone into later. The importance of this fall out rate following Stokes' Law is to introduce particle stability. The smaller particles are so stable that they do not fall out fast enough and, therefore, move in and out of the lungs without raining out. The statement has been made that normally produced particles are unstable. The particles produced by ultrasound do not fog up windows; also, do not rain out well. This is demonstrated when a deep breath is taken of this mist and the mist expelled after breath holding. The mist is expelled because it did not rain out. This has been demonstrated by filling an anesthesia bag with mist from an ultrasonic and mist from a conventional nebulizer. At the end of 10-15 minutes the mist from the conventional nebulizer has rained out and has collected as water. The mist from the ultrasonic is still a mist. If it does not rain out in the bag, it will not do so in the lungs either. One interesting note should be made. If an electrical charge is put into the bag the ultrasonic mist will then rain out. This ultrasonic mist does not follow the normal rain out pattern. As a rule the predominant particle size is very small with ultrasonic nebulizers.

It is hoped by now that the reader has some idea of the need for knowledge of particle size and methods of rain out and why they are important. This is the basis of delivery of water and medication.

The following statements are agreed on as particle size applies to inhalation therapy. (1) Particle must be five microns or below to get into the lungs. (2) Particles should be 1-5 microns to rain out according to Stokes' Law. Particles 0.2-1 micron are so small and light and the rate of fall is so slow that they enter and leave the lungs without raining out. Particles 0.2 micron and below are rained out by molecular collision of air molecules against the particles known as "diffusion precipitation." (Perhaps one can visualize this Brownian movement causing raining out of particles.) Particles two microns and larger do not get beyond the 1 mm bronchus. (This was shown in using two microns tantalum powder.) Particles above 1.2 microns do not enter the alveolar area.

Now that particle size is understood it follows that the number of particles per unit plus the particle size will tell what is being done and how efficiently it is being

done. The minimum number of particles would of course be zero particles. The maximum efficient particle concentration in the proper size range (from 0.1 micron to five microns) is 1000 particles per cc. The minimum to be effective is 100/cc. The number of particles produced per one cc of water herein presented is only an average obtained with densometer studies, gelitan plate, etc., and from mathematical calculations based on the particle sizes involved. Roughly 10,000,000 particles of usable size can be produced from one cc of water. To convert this to liters and particles per liter, 100 particles per cc. would be 100,000 particles per liter. One thousand particles per cc. would be 1,000,000 particles per liter. Thus, the limits of good delivery would be 100,000-1,000,000 particles per liter. The lower volumes are ineffective. The large number (1) cannot be supported and (2) collide with each other and coalace to such an extent as to reduce effective delivery. Thus, to work with 8,000,000 particles per cc. (average delivery from tubing) of water, then this would be enough for eight liters of gas flow. To nebulize one cc. in less than eight liters would be to overly concentrate and cause collision rain out of particles. This suggests that there can be too much water nebulized per unit of air. At room and body temperature air will hold more than 1,000,000 particles per liter. However, there is a limit of how much air will support. The upper effective level is dependent on the level that particles bump into each other and collect into large aggregates and in falling straight down carry out more particles and leave the air less saturated. Thus, with too high a particle production per unit volume of air flow one expects, and does find, a disproportionately increased water collection in the delivery tubes.

A nebulizer with an air flow of 15 L/min. would, for maximal water delivery, run 1.5 cc. of water per minute. Then, reduced to 10 L/min. it should reduce its output to 1 cc/min., etc. This will guarantee maximum delivery.

Particle size under 0.2 micron is undesirable in the lungs. Where a nebulizer produces large amounts of water at these extremely small particle sizes, they are normally very stable. They do not rain out along the bronchi. They are very stable even where turbulence is present. They regularly put a large amount of water into the alveolus where the particles enter the blood stream and/or d e n a t u r e surfactant and cause multiple focal alveolar collapse. (see, THE PULMONARY ALVEOLUS, HOW IT WORKS AND WHAT AFFECTS IT. Vol: 40, No: 1, July 1970, p: 33-41.) This may be of a sub-clinical degree that is found only by following total serum proteins, Hgb., Het., sodium, potassium, and chloride. Occasionally, there is frank water intoxication.

Once the right number and size of particles has been produced they have to be delivered to the patient's airway. If the air flows through a tube that will hold one liter per foot and is flowing at six L/min. then the flow rate is six L/foot/min. (This is assuming smooth tubing and laminar flow.) Thus, the particles will flow and fall out by Stokes' Law. It is subject to viscous resistance. (Laws relating to friction and gas flow should be reviewed.) The air in contact with the tubing walls causes friction and thereby, the faster the flow the greater the friction. This f r i c t i o n causes turbulence which causes particles to precipitate out on the tubing wall. Since friction is dependent on the tube surface area and is related to rate of flow, a proportion can be worked out relating volume flow to surface area. This will give an estimate of the rain out that will occur in delivery. This must be taken into account in water delivery. To put it practically a 1½-inch tube will have less surface area per unit flow than a 3/16-inch tube. If 6 L/min. is flowing through each, it is found that the large bore tube delivery will, due to laminar flow, be better whereas flow through the small tube plugs up due to turbulence. Water collects into large water droplets and is pushed through in heavy masses with most ineffective de-

livery. The small tubing to be effective must run at 2 L/min. or less to keep turbulence down to the point it will deliver. The corrugated tubing will cause a greater rain out on the surface than smooth tubing. That is, the smaller the tube diameter the lower the particles and slower the flow, if delivery is to be effective. The smallest tube size, not the average, determines how much effective delivery can be accomplished. For example, nasal catheters are of such size that if a particle nebulizer is used it must be run at less than 2 L/min. to deliver. This size tubing is best handled by a bubble humidifier (which does a poor job.). Nasal catheters used over 2 L/min. just inflate the stomach and cause oxygen ileus anyway. Where it is desired to deliver a lot of moisture large bore tubing must be used.

Particles in air act similarly to an airplane in air. The air may have a wind velocity over the ground of 150 m.p.h. However, once the plane is in this air it will move with the air over the ground at 150 miles per hour; backwards, sideways, forward, etc. The airplane acts in relation to the air as if the air were standing still. It must produce enough lift to stay afloat in the air the same as it would in still air. Particles, likewise, once in the air move in the air as if the air were standing still and they fall out due to Stokes' Law, the same as they would if the particles were in still air. As the air moves in relation to tubing, airway, etc., and turns, drops, and rises, etc., the particles float as if the air were still and fall due to gravity. Assume the case of a tube two mm. in diameter and of such length that the air flow through it would require two seconds for the air to flow through and also assume two particles that fall at 1 mm./sec. (Diagram 4). The particle at "X" 2 mm. high would take two seconds to fall out and since it is 2 mm. high and two seconds is the time for the air to flow through the tube it would move the length of the tube. The particle at "Y" on the other hand which is only 1 mm. high would move only ½ length of the tube. If the tube bends in relation to gravity the path would be different (Diagram 5). The particle is dropping downward at a speed due to the pull of gravity plus the flow rate of the gas. This would, like increased G's in an airplane, cause the particles to rain out by gravity at an increased rate. As a "U" turn is made, the particle tends to rain out. The heavier particles will have more weight and be more likely to rain out than the smaller lighter particles. Thus the number of bends and direction of the delivery tubing will affect the delivery of the particles. Short straight tubing delivers better than long bending tubing. One way to overcome this particular problem is to put the nebulizer at the delivery end of the tubing. This is the ideal place for the small volume nebulizers such as the IPPB machines which deliver very little moisture (some produce more effective moisture than others—See the ART OF USING IPPB, June: 1968, Vol: 37, No: 12, p: 1370-78).

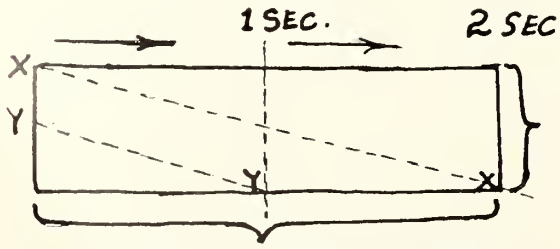


Diagram 4

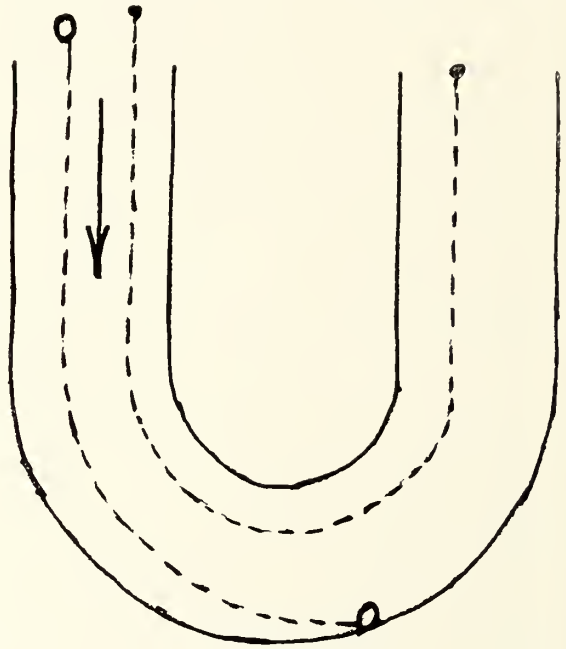


Diagram 5

If water particles of the right size are delivered to the nose, mouth, and/or tracheotomy, there is one last problem-delivery in the lungs.

To understand delivery into the lungs several things must be understood. Unlike the popular conception of the lung and delivery, the trachea has the smallest cross section volume in the lungs. The flow rate through the trachea is at the highest rate in the lungs. The volume size combined of the right and left main stream bronchus are greater than that of the trachea. Air flow slows in the right and left mainstream bronchi compared to that in the trachea. The combined tertiary bronchi have still greater volume and the flow rate gets slower. One might expect an increase in the flow rate of air in going from the large trachea to smaller bronchi, instead, the actual situation is such that air flow slows through the smaller tubes which have much larger total cross sectional volumes. Flow rates slow rapidly. This increases lateral pressures (Bernoulli Principle). Example: Diagram 6. As tubing

Diagram 6

total volume gets larger with lower flow, the individual tubing size gets smaller. This means more air-tube surface interface with increased frictional resistance to air flow. Thus, one finds (1) slow flow, (2) increased later pressures, (3) increase in surface area in proportion to air flow, all adding up to an increase in frictional resistance and factors that can produce turbulent rain out.

The actual path a particle will follow in the lungs is finally dependent on particle size and the patient's position. Gravity, according to Stokes' Law, acts on all of these particles. With the patient in the sitting position, the air in the trachea is moving downward and at a very rapid rate compared to the rate of flow in the rest of the lungs. The larger particles have a faster rate of fall and, adding to this the flow rate with both acting in the same direction, one then finds that the larger particles rain out on the medical and inferior walls with more on the left main stream bronchus than on the right which is almost straight down. Turbulence at the carina is not a problem unless too high a flow rate is caused in the trachea by the delivery equipment. The smaller particles float and follow the air flow pattern more easily. (Diagram 7A) As the bronchial tubes are tranversed and the air flow gets slower, the unchanged gravitational pull on the particles causes the heavier particles to gravitate to the lower lungs. The smaller lighter particles tend to flow both ways. (Diagram 7B) Only the light particles get into the upper lobes.

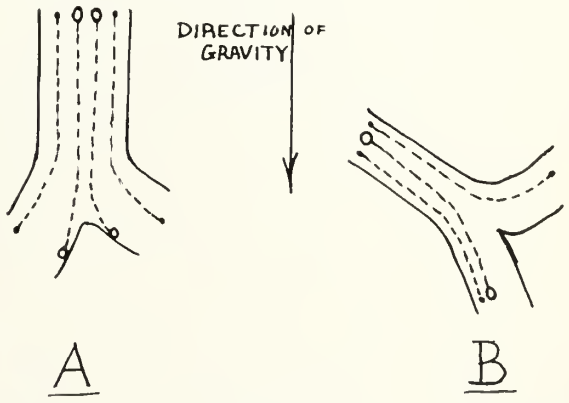


Diagram 7

If position would help, then to get larger and more particles to the upper and posterior portions of the lungs the patient should be treated lying down with breathing being done as much as possible with the diaphragm. Anterior chest disorders are best treated sitting in a chair backwards, arms folded on the back leaning forward. Thus, three positions for best delivery and treatment are necessary.

Now that the science of nebulization has developed to the point it has, there are many nebulizers on the market that deliver 3-5 cc. of water/minute and more. A new danger of overzealous treatment is evolving. When lung disease is being treated with water at

a high rate of delivery there sometimes develop patchy areas throughout the uninvolved portions of the lungs. The patient's fever has subsided. The white count is normal. The pneumonic process originally treated has cleared up by X-rays. The patient, however, feels bad generally. If PO_2, PCO_2, and pH are followed then it is noted that (1) as the pneumonia clears and as the patchy areas start to form the PO_2 starts to fall. The PCO_2 and pH remain normal. As vigorous treatement continues PO_2 falls further, pH falls and PCO_2 begins to go up. What has been forgotten is that the vigorous treatment of a diseased area is only accomplished after ventilation of the normally functioning lung has been completed. High water content causes denaturation of surfactant with alveolar collapse. Following this, frank atelectasis begins to develop. This is treatment induced and is evidence that too much water may be as bad as, or worse than, not enough. If, at the same time, total serum protein, hemoglobin and hematocrit are followed daily then hypervolemia to varying degrees is noted. Also, if sodium, potassium and chloride are also monitored then the hypervolemic state is noted to be hypo-osmotic. Thus, the patient feels as he does, and rightly so, due to iatrogenic causes (too much water).

So much for water. Next to be discussed will be pressures and machines.

Doctors Jettison Habit

To paraphrase a cigaret commercial of bygone days, most medical men are not tobacco men.

Almost two-thirds of the 34,000 physicians who responded to a poll by a national medical journal said they do not smoke. And about the same number said they advised their patients not to smoke.

"Steady, though unspectacular, gains (have been made) over the last six years for those intent on altering the uses of tobacco products," concludes Modern Medicine, a biweekly journal published in Minneapolis and distributed to about 200,000 doctors in private practice.

The survey was the third conducted by the publication. The first was in 1964, the year in which the U. S. surgeon general reported smoking to be hazardous to health. That poll showed that 52 per cent of 68,000 physicians did not use tobacco.

The second poll, taken in 1966, indicated that 58.8 per cent did not smoke. The latest poll shows 63 per cent of the respondents avoid the habit.

"Doctors . . . appear to be more optimistic than ever about their efforts to turn patients away from smoking," the journal states. "A solid majority believe they have been successful in changing the smoking habits of patients and a few rate their chances for success as good."

Two-thirds of those replying to the 1970 poll said they routinely ask adult patients whether they smoke, and the same percentage advise against the habit.

—National Observer

Facts On Heart Disease

The cardiovascular death rate among Americans under age 65 has declined 20 percent since 1950, the American Heart Association reported in its annual statistical summary of "Heart Facts." While heart attacks have declined only two percent among persons in this age group, the death rate from high blood pressure and hypertensive heart disease has dropped 63 percent, stroke 35 percent, and other cardiovascular diseases 27 percent.

CALORIES / 7 oz. Serving*

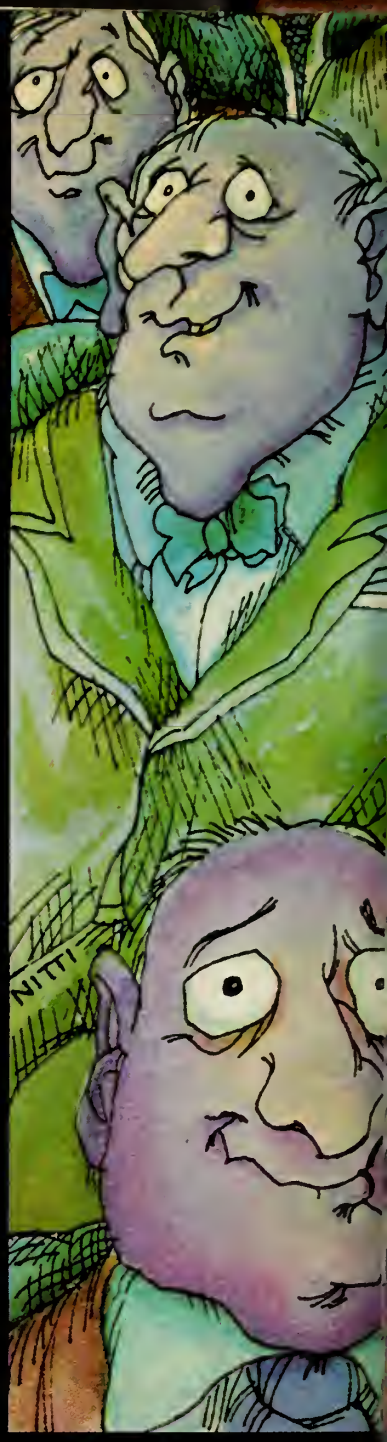
Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

When the stage is set for diarrhea...



Diarrhea . . . thwarted once again!

Time after time . . . just when plans seem sure to be shattered . . . the effective and prompt action of Lomotil comes to the rescue.

Here is an antidiarrheal with a performance record that few can challenge. A versatile actor, Lomotil stars in the treatment of diarrhea associated with gastroenteritis, irritable bowel, functional hypermotility, regional enteritis, malabsorption syndrome, drugs, acute infections, ulcerative colitis and food poisoning. In addition, it plays a major role in the control of intestinal transit time in patients with ileostomies and colostomies and of the diarrhea occurring after gastric surgery.

So . . . when Lomotil is in the cast (even in a supporting role), it's curtains for diarrhea!

Lomotil®

TABLETS/LIQUID

Each tablet and each 5 cc. of liquid contain:
Diphenoxylate hydrochloride . . . 2.5 mg.
(Warning: may be habit-forming)
Atropine sulfate . . . . . 0.025 mg.

Saves the Show

Warnings: Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: Lomotil is a federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be

kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise.

Overdosage: The medication should be kept out of reach of children since accidental overdosage may cause severe, even fatal, respiratory depression.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:
3-6 mo. . . . ½ tsp.* t.i.d. (3 mg.)
6-12 mo. . . ½ tsp. q.i.d. (4 mg.)
1-2 yr. . . . . ½ tsp. 5 times daily (5 mg.)
2-5 yr. . . . . 1 tsp. t.i.d. (6 mg.)
5-8 yr. . . . . 1 tsp. q.i.d. (8 mg.)
8-12 yr. . . . 1 tsp. 5 times daily (10 mg.)
Adults: . . . . 2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful.

Use of Lomotil is not recommended in infants less than 3 months of age.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

SEARLE Research in the Service of Medicine
G. D. Searle & Co., Chicago, Illinois 60680

Nothing new about Synirin other than ... it's a stable, uncoated, fast disintegrating tablet of aspirin with pentobarbital potentiating the aspirin analgesia.

Synirin®

ASPIRIN 5 GR.—PENTOBARBITAL 1/8 GR.

ETHICAL ANALGESIA (economical if prescribed in 100 units with privilege of refills)

PRESCRIBING INFORMATION: To relieve tension headaches and arthritic pains, 2 tablets q 4 h. Aspirin and pentobarbital begin their action promptly, continuing for about 4 hours. The small pentobarbital content gives no perceptible sedation. Pentobarbital is destroyed by the body and there is no accumulation. Synirin will supply any aspirin therapy with equal safety. Use aspirin with caution in peptic ulcer.

EACH UNCOATED TABLET CONTAINS:

Aspirin .....325 mg. (5 gr.)
Pentobarbital* .....8 mg. (1/8 gr.)
*May be habit forming.

Federal law prohibits dispensing without prescription
DISPENSED IN BOTTLES OF 100 AND 1000 TABLETS

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

A clinical supply of this new aspirin formulation may be requested.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 28; Medical College of Alabama, 1967; National Board; serving general surgery residency Available July 1971. LW-3

Age 49; University of Pittsburgh, 1951; seeking group or industrial practice. LW-3/1

Age 27; George Washington University 1969; National Board; Available July 1971. LW-3/2

Internal Medicine—

Age 34; Georgetown University, 1962; Board certified; seeking group or associate practice. Available August 1971. LW-4

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 33; Medical College of Alabama, 1963; National Board; Available January 1971. LW-4/1

Age 30; New York University, 1965; Board eligible; National Board; interest in cardiology. LW-4/2

Age 31; University of Arkansas, 1964; Board certified; seeking group or associate practice, interest in cardiology. Available July 1971. LW-4/3

Age 31; Albert Einstein College, 1964; National Board, seeking group, associate or institutional practice. Available July 1971. LW-13

Age 34; Louisiana State University, 1963; Board certified; seeking group practice. Available August 1971. LW-13/5

Obstetrics-Gynecology—

Age 34; New York Med. College, 1964; National Board, Board eligible; seeking group or associate practice. Available August 1971. LW-5/1

Ophthalmology—

Age 30; University of Nebraska, 1965; seeking group or associate practice. Available July 1971. LW-6

Age 34; Yale University, 1964; National Board, Board certified; seeking solo, group, industrial or associate practice. Available July 1971. LW-6/1

Otolaryngology—

Age 33; Loyola University, 1964; Board eligible; seeking solo or associate practice. Available July 1971. LW-7

Age 33; Wayne State University, 1966; Available July 1971. LW-7/1

Age 31; Northwestern University, 1964; Board eligible; National Board; seeking solo, group or associate practice. Available September 1971. LW-7/2

Pathology—

Age 32; Case Western Reserve University, 1964; National Board; Board certified; seeking group, associate or institutional practice. Avialable August 1971. LW-8

Age 33; Creighton, 1964; Board certified; National Board; seeking group or associate practice. Available July 1971. LW-8/1

Age 30; University of Texas, 1967; seeking solo, group or associate practice. Available March 1971. LW-22

Pediatrics—

Age 31, American University of Beirut, 1967; Board certified; interested in pediatrics/pediatric cardiology. seeking group or associate practice. Available July 1971. LW-9/1

Psychiatry—

Age 47; Mainz Medical University, Germany, 1957: Board eligible; seeking group industrial, associate or institutional practice. LW-9

Radiology—

Age 31; University of Kansas, 1965, seeking group practice. Available July 1971. LW-10

Age 32; Medical College of Alabama, 1963; completing residency in radiology. LW-24/2

Age 31; Vanderbilt University, 1965; National Board; Board certified; seeking group or associate practice. Available July 1971. LW-10/1

Age 35; University of North Carolina, 1961, Board eligible; Available early 1971. LW-10/2

Age 30; University of Kentucky 1965; Board eligible; seeking group, or associate practice. Available July 1971. LW-10/3

Surgery—

Age 30; Medical College of Alabama 1965; National Board; Board eligible; interested also in general practice with surgery; Available July 1972. LW-11

Age 31; Medical College of Alabama 1964; National Board. Available July 1971. LW-31/6

Age 33; University of Tennessee 1963; Board eligible; seeking solo, group, associate or institutional practice. Available July 1971. LW-11/1

Age 33; Emory University 1964; Board eligible; seeking solo, group or associate practice. Available July 1971. LW-11/2

Age 35; West Virginia University, 1964; Board eligible; interested in thoracic and cardiovascular surgery; group or associate practice. Available July 1971. LW-11/3

Locations Wanted

Student Health

Age 50; Indiana University, 1953; National Board. LW-13

Age 33; Medical College of Alabama, 1964; Board certified. LW-13/1

Urology—

Age 33; University of Chicago 1963; Board eligible; interested in academic affiliation. Available August 1971. LW-12

Physicians Wanted

Special Openings—

Qualified specialists wanted for private practice in internal medicine, general surgery, Ob-Gyn, general practice, pediatrics, anesthesiology, orthopedics, and other sub-specialties. Office space in 250-bed private hospital, Guaranteed initial income and other benefits. PW-17

General surgeon, Board certified, needs young associate to do general practice including obstetrics. Salary negotiable. PW-19

Two physicians, ages 39 and 40, are interviewing for a select individual to enter association in a university town of 80,000 population. Outstanding new physical plant. Readily available hospital privileges. Four and one-half day work week. Three free weekends per month. PW-19/2

Opportunity for ENT, Internal Medicine, and Orthopedic Surgery practitioners to join partnership at clinic located in city of 38,000 population in trade area of 150,000 population in northeast Alabama. PW-20/2

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Opportunity in town of 4,000 population in trade area of 50,000 population, located within 100 miles of two metropolitan areas in south Alabama. Industrial and farming area. 44-bed hospital. Office space and equipment available in new building with another physician. Several churches, schools, and service clubs. PW-1

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

For town of 10,000 population in county of 40,000 population located in scenic mountainous section of Northeast Alabama. Office space and equipment available. Hill-Burton hospital-nursing home. Expanding industries in top agricultural area. PW-1-2

For community of 2,000 population, plus large trade area, located in Southeast Alabama. Modern clinic, fully equipped. PW-1-3

Physician wanted to join 39 year old Medical College of Alabama graduate in a well established practice in West Central Alabama town. Salary initially followed by full partnership. PW-1-4

Hospital based professional association in suburb of Birmingham is seeking a young general practitioner who has completed military obligation. High income, profit sharing, paid vacation and retirement plan. Complete facilities available. No investment required. PW-1-5

Opportunity in town of 2,500 population in Northeast Alabama in trade area of 15,000 population, located 7 miles from city of 55,000, and four miles from a 300-bed modern hospital. Position available for one who has not served military commitment. Clinic building and some equipment available. Willing to build a new clinic for two doctors or a small group. Especially seeking general practitioner and internist. PW-1-7

Opportunity for two general practioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

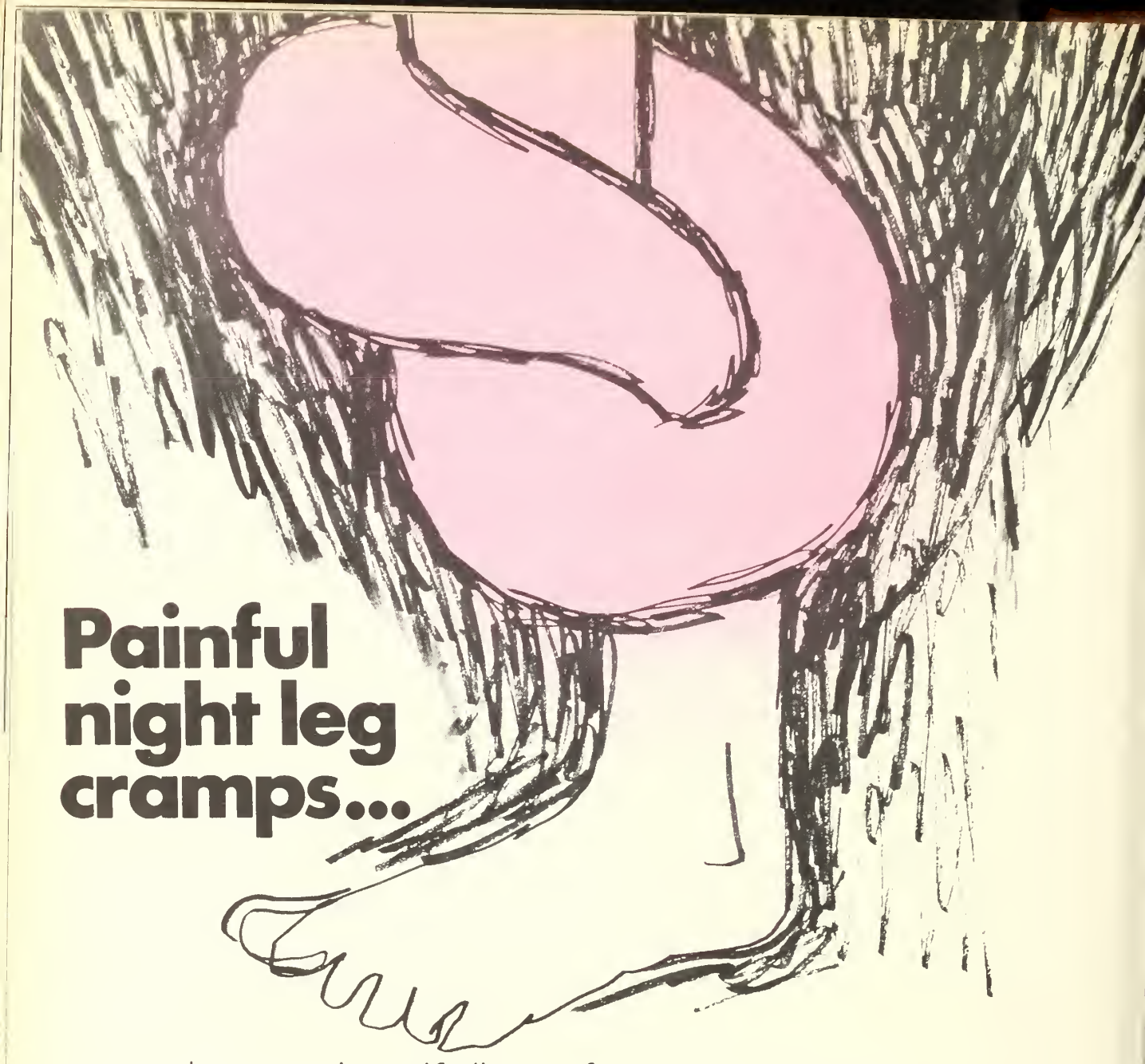
Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-103 / 2/71 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Infarmatian—Campasitian: Each white, beveled, campressed tablet contains: Quinine sulfote, 260 mg., Aminophylline, 195 mg. **Indicatians:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrambaphlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicoted in pregnancy because of its quinine content. **Precautians/Adverse Reactians:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discantinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dasage:** One tablet upan retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 toblets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

Q103 2/71

around the state

Vital Statistics

NEW MEMBERS

Etowah County

Walker, George Philips, III, b 36, mc Alabama 63, sb 64, Medical Arts Building, 303 Bay Street, Gadsden, Alabama 35901 U

Mobile County

Flynn, Edward Joseph, Jr., b 38, mc University of Mississippi 63, recip. Miss. 69, 171 Louiselle Street, Mobile, Alabama 36607 S

Green, James Winslow, b 36, mc Vanderbilt 62, recip. Tennessee 70, 120 Louiselle Street, Mobile, Alabama 36607 PL

Megginson, Autry Greer, b 37, mc Alabama 65, sb 66, 1720 Springhill Avenue, Mobile, Alabama 36604 U

Newton, Philip Thomas, Jr., b 43, mc Alabama 69, recip. NBME 70, 266 South McGregor, Mobile, Alabama 36608 GP

Toler, Enoch McLain, b 38, mc Louisiana 64, recip. Louisiana 70, 1720 Springhill Avenue, Mobile, Alabama 36604 ObG

Morgan County

Ford, Lawrence Giddens, b 39, mc Alabama 65, sb 66, 1501-7th Street, S. E., Decatur, Alabama 35601

MEMBERS DECEASED

Houston County

Ellis, John T., Dothan, Alabama, Deceased 12/70

Jackson County

Trammell, Edward L., Scottsboro, Alabama Deceased 12/13/70

Jefferson County

Cooley, Beamon S., Sr., Birmingham, Alabama, Deceased 9/7/70

Mobile County

Slaughter, Howel W., Mobile, Alabama, Deceased 12/2/70

Montgomery County

Reynolds, Fred D., Montgomery, Alabama, Deceased 12/4/70

Tuscaloosa County

Davis, Luther, Jr., Tuscaloosa, Alabama, Deceased 11/29/70

CHANGES OF ADDRESS

Calhoun County

Clark, Charles F., present Fort McClellan, Alabama to 1136 Alpine, Boulder, Colorado 80302

Cullman County

McAdory, Edward D., present Cullman, Alabama to 811-2nd Avenue, S. W., Cullman, Alabama 35055

Etowah County

Johnston, William W., present Gadsden, Alabama to Baptist Memorial Hospital, 1007 Goodyear Avenue, Gadsden, Alabama 35903

Jefferson County

Brower, Walter J., present Birmingham, Alabama to 1025 South 18th Street, Birmingham, Alabama 35205

Cezayirli, Cemil, present Birmingham, Ala-

bama to 3015 Seventh Avenue South, Birmingham, Alabama 35233

Crittenden, William C., present Birmingham, Alabama to 1529 North 25th Street, Birmingham, Alabama 35234

Elmore, John D., present Birmingham, Alabama to 3015 Seventh Avenue South, Birmingham, Alabama 35233

Ford, Walter R., Jr., present Birmingham, Alabama to 11 West Oxmoor Road, Birmingham, Alabama 35209

Friedman, Louis L., present Birmingham, Alabama to P. O. Box 3796, Birmingham, Alabama 35211

Garber, Jacob H., present Birmingham, Alabama to 2320 North 2nd Street, Harrisburg, Pennsylvania 17110

Garrett, Julius M., present Birmingham, Alabama to 803 Medical Arts Building, Birmingham, Alabama 35205

Giles, Charles H., present Birmingham, Alabama to 1919 South 7th Avenue, Birmingham, Alabama 35233

Holt, Ira H., present Bessemer, Alabama to 705 Memorial Drive, Bessemer, Alabama 35020

Imler, Allison E., present Fairfield, Alabama to P. O. Box 20257, Birmingham, Alabama 35216

Kennedy, Hughes, Jr., present Birmingham, Alabama to 3118 Carlisle Road, Birmingham, Alabama 35213

Kennedy, Hughes, III, present Birmingham, Alabama to 2930 North 16th Street, Birmingham, Alabama 35234

Mathews, Robert D., present Birmingham, Alabama to 414 East Avenue "A", Kileen, Texas 76541

Norman, Patricia H., present Birmingham, Alabama to 86 Northhill Parkway Drive, Jackson, Mississippi 39205

Pitts, William R., present Woodward, Alabama to 1008-9th Terrace, Pleasant Grove, Alabama 35127

Pruet, Charles W., present Birmingham, Alabama to c/o Lloyd Noland Hospital, P. O. Box 538, Fairfield, Alabama 35064

Smith, Patrick H., present Birmingham, Alabama to 9105 Parkway East, Birmingham, Alabama 35215

Stroud, Robert M., present Birmingham, Alabama to 700 South 19th Street, Birmingham, Alabama 35233

Tarpley, William T., present Fairfield, Alabama to 2924 Thornhill Road, Birmingham, Alabama 35213

Wilhite, Wilson C., Jr., present Mountain Brook, Alabama to 4300 Kennesaw Drive, Birmingham, Alabama 35213

Lauderdale County

Langstaff, Quintus A., present Florence, Alabama to 321 South Pine Street, Florence, Alabama 35630

Mobile County

Behlen, Charles H., II, present Mobile, Alabama to 3213 Dauphin Street, Mobile, Alabama 36606

Campbell, Michael L., III, present Mobile, Alabama to Chicago, Illinois

Carrington, Stewart G., present Mobile, Alabama to 3213 Dauphin Street, Mobile, Alabama 36606

McKee, Wilbur E., present Grand Bay, Alabama to P. O. Box 365, Grand Bay, Alabama 36541

Reynolds, Hugh, present Mobile, Alabama to 3213 Dauphin Street, Mobile, Alabama 36606

Montgomery County

Ashurst, John M., Jr., present Montgomery, Alabama to 1401 East South Boulevard, Montgomery, Alabama 36111

Brown, Richard E., present Montgomery, Alabama to 345 South Ripley Street, Montgomery, Alabama 36104

(Continued on Page 523)

When Preventing Constipation is a Concern . . .

Consider

SURFAK®

dioctyl calcium sulfosuccinate

(stool softener)

Surfak prevents constipation:

- **naturally**
  - . . . without bowel distention
  - . . . without adding sodium to the system
  - . . . without requiring unusual intake of water
- **conveniently**—one 240 mg. capsule per day
- **economically**—costs less per effective daily dose*

Supplied: Bottles of 15, 100 (FSN 6505-926-8844) and 1000 (FSN 6505-890-1627) and Unit Dose 100's (10 x 10 strips).

*based on actual drug store survey of prescribed dosages

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-166

in cardiac edema

Dyazide®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

SK&F

SK&F Co., Carolina, P.R. 00630
a subsidiary of Smith Kline & French Laboratories

DZ-108

(Continued from Page 520)

Hill, Luther L., present Montgomery, Alabama to 363 South Ripley Street, Montgomery, Alabama 36104

Virgin, William B., present Montgomery, Alabama to 1401 East South Boulevard, Montgomery, Alabama 36111

Weathington, Warren T., present Montgomery, Alabama to Florida

NEW TELEPHONE NUMBERS

Ashurst, John M., Jr., Montgomery	281-0560
Behlen, Charles H., II, Mobile	479-9538
Carrington, Stewart G., Mobile	479-9538
Cezayirli, Cemil, Jefferson	328-2031
Cochran, Gerald T., DeKalb	623-2105
Cockerham, Howard L., Jr., Talladega	245-5241
Crenshaw, Francis M., Sumter	652-7979
Crittenden, William C., Jefferson	252-6121
Elmore, John D., Jefferson	328-2031
Flynn, Edward J., Jr., Mobile	432-1659
Ford, Lawrence G., Morgan	353-0605
Garrett, Julius M., Jefferson	252-8193
Green, James W., Mobile	438-2451
Johnston, William W., Etowah	546-1582
Kennedy, Hughes, Jr., Jefferson	252-4441
Kennedy, Hughes, III, Jefferson	251-0256
Langstaff, Quintus A., Lauderdale	766-7470
Megginson, Autry G., Mobile	433-1895
Newton, Philip T., Jr., Mobile	342-7111
Pitts, William R., Jefferson	744-6792
Pruet, Charles W., Jefferson	785-2121
Reynolds, Hugh, Mobile	479-9538
Tarpley, William T., Jefferson	879-0351
Toler, Enoch M., Mobile	438-4548
Veach, Everett G., Calhoun	236-4121
Virgin, William B., Montgomery	281-0560
Walker, George P., III, Etowah	547-1605
Wilhite, Wilson C., Jr., Jefferson	871-3173

MEMBERS TRANSFERRED

Calhoun County

Veach, Everett Gaines, 429 East 9th Street, Anniston, Alabama 36201 from member Lee County Medical Society to member of Calhoun County Medical Society. Or

Sumter County

Crenshaw, Francis Moody, Livingston, Alabama 35470 from member Marion County Medical Society to member of Sumter County Medical Society. GP

Talladega County

Cockerham, Howard Lea, Jr., Craddock Clinic, 308 West Hickory, Sylacauga, Alabama 35150 from member Coosa County Medical Society to member of Talladega County Medical Society. GP-S

Not just a motel it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

When irritable colon feels like this

The blowfish, a small species of fish, reacts to stress or fright by puffing itself up wi air. After about a dozen noisy gulps the belly is balloo shaped and hard. When replaced in the water the ai quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

The Pressure Is On

The pressure is on! The pressure is on doctors and hospitals, on communities and government, to make sweeping changes in the quality and quantity of methods of delivery of health care. A recent, nationally televised series on this "crisis" increased the pressure. An initial reaction interpreted this program as intense propaganda for national health insurance—and well it might have been.

Despite the bias of such a barrage of incidents, situations, and opinions, one must concede the problem of widely varying quality of care for most, and the non-existence of care for some. Costs have become a near-critical issue.

Clearly, American doctors must make a decision. We can continue as we are, attempting to justify our position—certainly, there is a great amount of good in medicine in this country. Or, we can take the best of our present methods and incorporate these into new ways of health care. Would you, for example, see one more patient a day, possibly indigent or low-income, for standard, sub-standard, or no fee? This would take care of 10,000 more patients a week in the Dade County area. Would you give two hours a week or one day a month in a low-income area, paid on a time and travel basis instead of fee-for-service situation? This would provide 30,000 people each month with ambulatory health care. Would you participate in a Foundation for health care, organized and run by doctors, for which you would work certain periods of time in return for reasonable compensation? This would eliminate many problems of financing, on which we are hung-up. Would you participate in an areawide preventive health p r o g r a m , in which citizens would pass through multiphasic screening centers, followed by doctor-directed physical exams, based on simple, easy, direct methods? Data from such programs should soon tell us where emphasis should be placed to maintain a healthy population. Would you be part of a small team to go to a non-doctored rural area once a month to provide out-patient service to a community? This would provide some answer to the doctor distribution problem.

In essence, would you be willing to extend yourself a bit, settle for a little less money, change some of your ideas about how it should be done, and render more service as a professional dedicated to better health care?

—Rufus K. Broadaway, M. D.
The Bulletin
Dade County (Fla.)
Medical Society

The Fewer The Better

Hope for mankind is out of this world if science is correct in deciding that "biologically, man is designed to function best in small groups." The population explosion and the spiraling noise of civilization are combining to endow homo sapiens with deafness and depression, ulcers and high blood pressure, drinks and drug addiction.

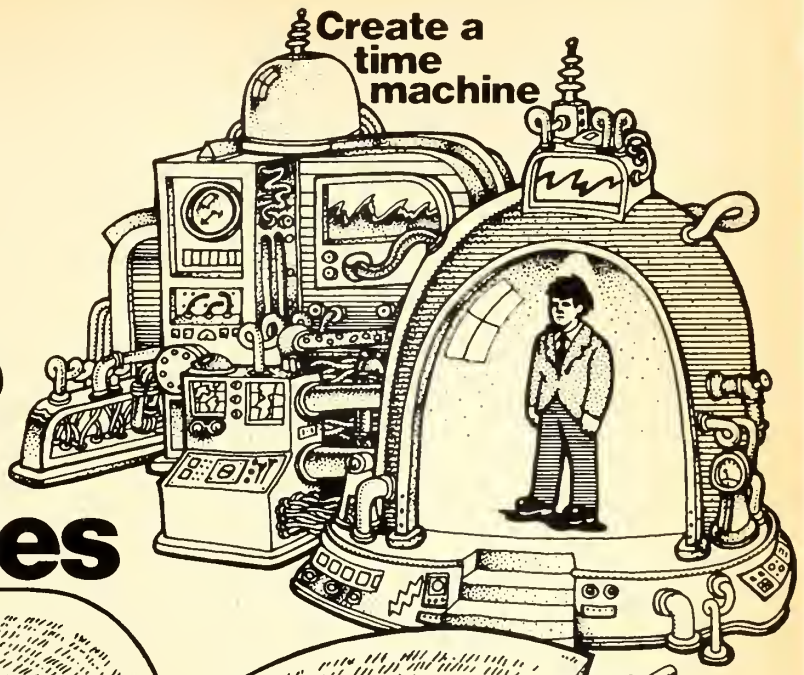
These are the findings of a recent postgraduate conference sponsored by the Chicago Medical Society, expressed in speeches by Health Commissioner Murray C. Brown, M. D., and William R. Barclay, M. D., associate executive director of the American Medical Association.

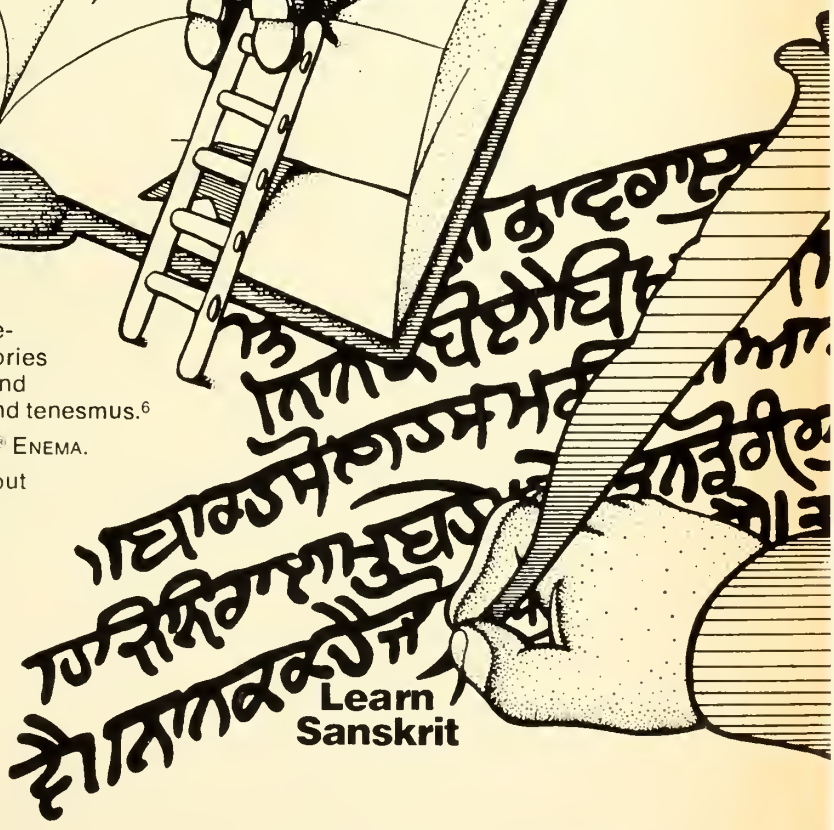
Four Things

Four things a man must learn to do
If he would make his record true:
To think without confusion clearly;
To love his fellow men sincerely;
To act from honest motives purely;
To trust in God and heaven securely.

—Henry van Dyke

What to do until suppositories work:





Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

C. B. FLEET CO., INC.
Lynchburg, Va 24505

Fleet pharmaceuticals

Warning: Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present.
Caution: Do not administer to children under two years of age unless directed by a physician.

References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964

Efudex®
(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses –
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completely. Residual mild erythema remains in some areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N J 07110

An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

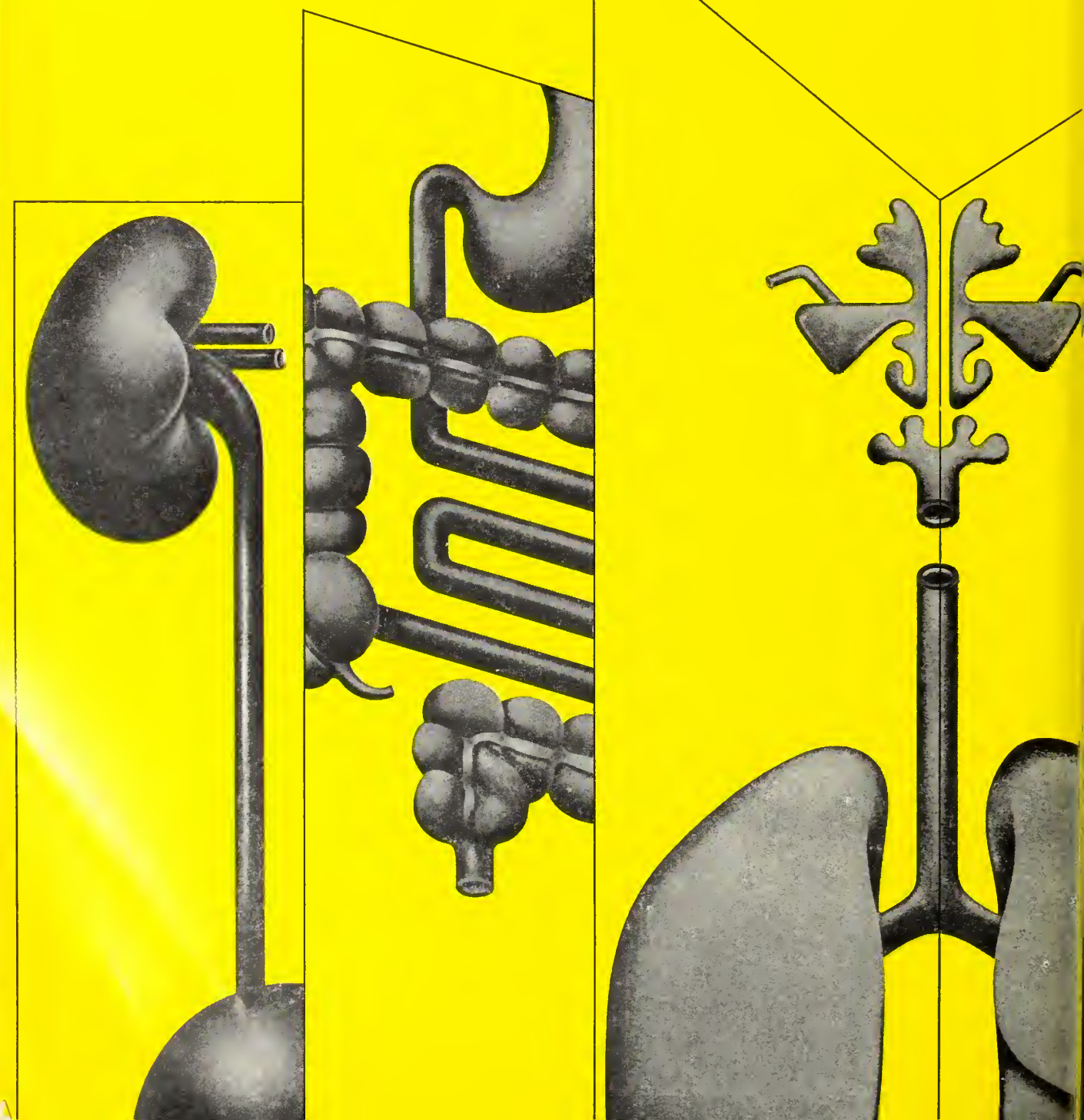
new
Efudex®
(fluorouracil)
cream/solution

Tract Record.

A record of clinical efficacy in treating bacterial infections of the respiratory, genitourinary and gastrointestinal tracts caused by susceptible strains of pneumococci, H.influenzae, staphylococci, streptococci, Klebsiellae, E.coli, Enterobacter, Shigella.

A record of years of dependable broad-spectrum activity.

A record of high urine and serum antibiotic levels all with a 500mg. potency, b.i.d. convenience and low prescription cost.



Tetrex® bidCAPS®

(500 mg. tetracycline phosphate complex)

For complete information consult Official Package Circular.
(3) 4/2/70

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.

Contraindications: Hypersensitivity to tetracyclines.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Supplied: Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

The High Cost Of Politics In The PMA

In view of the approaching elections of the officers of the Philippine Medical Association this coming May in Cebu City, it is pertinent and necessary to make certain observations regarding the state of politics in our prestigious organization.

First, in order to get elected, especially to the positions of President and Secretary-Treasurer, it has become necessary for the candidates to spend a lot of money. Some have to resort to paying for the transportation of members to the convention site, of defraying their registration or membership fees or to lavish entertainments. Others even spend for the hotel accommodations of prospective voters. It is even bruited around that a candidate spends at least ten thousand pesos to win.

Second, there have been complaints of proxy registration and proxy voting despite Comelec vigilance. This is possible because whenever this matter is brought up to the attention of Comelec somehow the argument that we should have faith in the honesty and integrity of PMA members is entertained.

But we should not lose sight of the fact that these practices in the conduct of our elections are not contributing to the good image of our Association. On the contrary, they serve to promote misunderstanding, disharmony and even vindictiveness among some of our members. Let us remedy the situation before it deteriorates to drag down the excellent public image which fortunately the Philippine Medical Association enjoys today.

These observations are made in the hope that something may be done by the officialdom and members of our Association to assure that the conduct of our PMA elections will always be in a manner every PMA member would feel happy and be proud of.

—E. L. G.

—Journal of the PMA

2
3
4
5
6

the night shift of depression... insomnia

epression is a 24-hour-a-day problem. And insomnia is ten its nocturnal expression. In fact, insomnia may be a y symptom in establishing the diagnosis of depression.

LAVIL HCl (Amitriptyline HCl, MSD) may prove quite elpful when you have arrived at such a diagnosis. Unlike sychic energizers or agents that merely elevate mood, LAVIL HCl embodies a mild antianxiety action which anifests itself even before the fundamental antidepressant tivity of the drug becomes evident. Daytime drowsiness curs in some patients, usually within the first few ys of therapy.

OTE: Not recommended during the acute recovery phase llowing myocardial infarction. Patients with cardiovascular sorders should be watched closely; arrhythmias, sinus chycardia, and prolongation of the conduction time have en reported, particularly with high doses; myocardial farction and stroke have been reported with drugs of this ass. Close supervision is required for hyperthyroid tients or those receiving thyroid medication. Concurrent ectroshock therapy may increase the hazards of therapy; ch treatment should be limited to patients for whom it is sential. Discontinue the drug several days before elective rgery if possible.

---

ntraindications: Known hypersensitivity. Should not be given comitantly with or within at least 14 days following the discontinuance a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl tiously with gradual increase in dosage until optimum response is ieved. Not recommended during the acute recovery phase following ocardial infarction or for patients under 12 years of age.

rnings: May block the antihypertensive action of guanethidine or similarly ing compounds. Should be used with caution in patients with a history of zures or urinary retention, or with narrow-angle glaucoma or increased raocular pressure. Patients with cardiovascular disorders should be tched closely; arrhythmias, sinus tachycardia, and prolongation of the duction time have been reported, particularly with high doses; ocardial infarction and stroke have been reported with drugs of this ss. Close supervision is required for hyperthyroid patients or those eiving thyroid medication. May impair mental and/or physical abilities uired for performance of hazardous tasks, such as operating machinery driving a motor vehicle. Safe use during pregnancy and lactation has not n established; in pregnant patients, nursing mothers, or women who may ome pregnant, weigh possible benefits against possible hazards to her and child.

cautions: When used to treat the depressive component of schizophrenia, chotic symptoms may be aggravated; in manic-depressive psychosis, ressed patients may experience a shift toward the manic phase, and noid delusions, with or without associated hostility, may be ggerated; in any of these circumstances, it may be advisable to reduce dose of amitriptyline HCl, or to use a major tranquilizing drug, such as henazine, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.

How Supplied: Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

when the diagnosis is depression

ELAVIL® HCl
(AMITRIPTYLINE HCl | MSD)

MSD MERCK SHARP & DOHME

Hobbies To Fill A Doctor's Leisure

If It's A Muzzle-Loader, You Need It Here

IT WAS A LONG TIME BETWEEN SHOTS when these muzzle-loaders were being fired with intent to kill at the enemy by the original "Raccoon Roughs" of Civil War days. There are two General Practitioners in this group of 11. One is the subject of the accompanying article, Dr. Charles Alfred Curtis, kneeling, center; the other Dr. John Andrews of Decatur, Georgia, standing, right.

Somewhere between those three: the sword, the bow and the armored knight, and these three: the torpedo, the bomb and the nuclear warhead, is the muzzle-loader.

This once mighty weapon of battle, more recently a collector's item, has now become the symbol and the instrument of a unique organization of sportsmen founded 20 years ago in tradition-loving Virginia and fast spreading over the country, including the Deep South, Alabama and Georgia.

It was an accident of birth that made Chicago the city of nativity for Charles A. Curtis, Jr.; just as it was the accident of ancestry that made him a doctor and a Civil War buff. His grandfather was Dr. Robert C. Curtis of Calera and his great-grandfather was Major John Pitts, of the colorful Confederate combat-tried "Raccoon Roughs," identified from 1861 to 1865 by their distinctive coonskin caps.

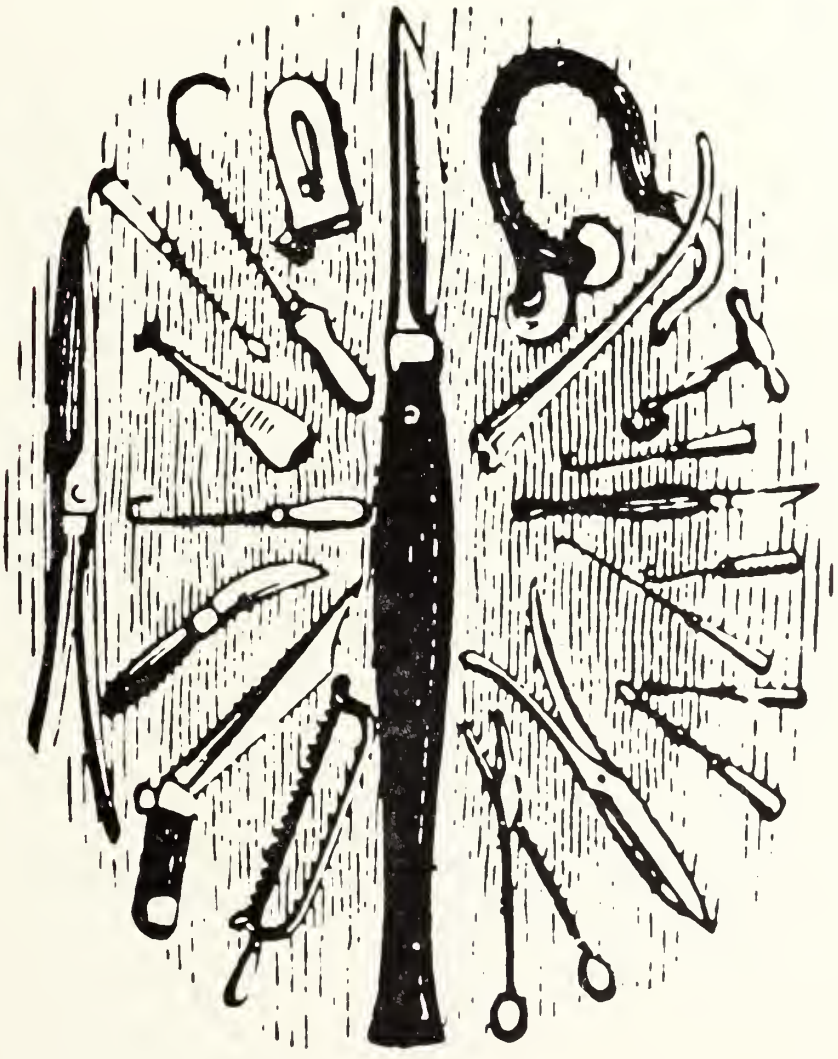
The future Dr. Curtis returned to his grandparents' town of Calera, and his first ten years of schooling were in the Shelby County system. The next four years were spent on active duty in the U. S. Air Force, where he was a survival instructor at Stead Air Force Base, Nevada. After pre-med at the University of Alabama, Tuscaloosa, he received his M. D. degree from the U. of A. Medical College, Birmingham, in May, 1965. A year of private practice in Calera was sandwiched between his internship at Lloyd Noland Hospital, Fairfield, and his rejoining the staff of that hospital.

Dr. Curtis is married to the former Barbara Arrington of Tampa, Fla., and they

(Continued on Page 536)

In 1852 it was reported that practicing medicine in the southern section of Alabama were "40 regular practitioners, 2 hemeopathists and hydropathists, 3 root doctors and Thompsonians, 3 general quackery and one idio-eclectopathist."

BLUE CROSS-BLUE SHIELD OF ALABAMA



(Continued from Page 534)

have four children: Lee Anne, 11; Charles III, 10; Jack, 6; and Carolynn, 4; not counting one English buldog and one Siamese cat. He commutes between his hospital responsibilities in Fairfield and his home in Montevallo, 30 miles away.

The "Raccoon Roughs," like other celebrated units in the North-South Skirmish Association, uses muzzle-loaders in periodic target competition, generally dressing the part that distinguished their outfit from others that fought in the fratricidal strife of 11 decades ago. So nearly all of the members are collectors of Civil War memorabilia, particularly muzzle-loaded weapons.

Once upon a time, when men in blue and men in gray were aiming guns at each other around the approaches to Mobile, one of the lethal pieces was a 30-pounder Parrott cannon. Which side was firing it is a moot question today, although the 3,500-pound barrel was cast in a foundry at Cold Springs, New York.

Dr. Curtis, the present owner, who is now busy building white-oak wheels for it, traces the cannon's history back to a native New Yorker, William F. Aldrich, who came to Alabama after the war, founded the town of Aldrich in Shelby County, and was elected to Congress three times on a Republican ticket—with Populist support.

Here is one muzzle-loader that will not be entered in competition in the North-South Skirmish Association, Inc. But it will be an ornamental part of the scenery around Dr. Curtis's Montevallo home.

Who'll Be No. 1 In 2000?

What single nation in all the world promises to distance all its rivals in the race to the year 2000? Not the United States! Not Russia! Not Red China!

It is a nation that just a quarter of a century ago had been battered into submission, disarmed, stripped of her colonies and was barely perceptibly breathing under the radioactive ashes of a nuclear blast.

"The Japanese Challenge" is the title of a 350-page book by Robert Guillain, a French Doctor of Law, just published in an English translation by Lippincott of Philadelphia.

"While the United States has spent vast fortunes on military buildup, the Vietnam War, worldwide policing actions, and the race to the moon," says the book, "Japan has concentrated all her resources, human and financial, on economic competition and the exchange of ideas."

The results are already apparent, with the world's largest newspaper, the biggest blast furnaces and cargo ships, the fastest trains, the finest electronic equipment, and technical development "beside which American, German and Soviet achievements seem comparatively unenterprising" . . . and that, it might be added, includes the fields of medicine and surgery.

Ulcer Re-lief!

Dicarbosil®
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

A
BUILDING BLOCK
TO RECOVERY

One tablet q.i.d.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. in infection, appropriate anti-infective therapy should be given.
Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
Precautions: it should be used with caution in patients with abnormality of tha blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Raports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK BITABS U.S. PATENT NO 3,004,893 9/70 0.009A 161

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfanamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfanamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream – Four-ounce tube with or without applicator. Suppositories – Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

Legal Page:

Patients Refusal To Cooperate With The Physician

by J. Douglas Evans, J. D., Director,
Legal-Legislative Affairs

An adult who is of sound mind, and is capable of appreciating the given medical situation, may legally refuse any medical examination, treatment, or surgery. This is a general rule recognized in most jurisdictions. However, there are exceptional cases in which the law provides for compulsory medical procedure. Such compulsory procedures occur in the form of vaccinations, T. B. examinations, treatment of venereal disease, blood tests to detect crime, and certain authorized medical functions of health officers, and officials of State penal and mental institutions.

If none of the above mentioned compulsory medical procedures are involved, and if a patient refuses or neglects to appear for treatment, or refuses to undergo diagnostic examination recommended by the physician, the physician may withdraw from the case by: 1) giving the patient due notice of his intention to withdraw, and 2) giving the patient sufficient time to secure medical attention elsewhere. The n o t i c e to withdraw should be in writing, and should specify the reason for the decision to withdraw, and the period in which the physician's services will remain available pending the patient's decision as to his choice of another physician.

If the patient is hospitalized, and refuses surgery or treatment, the doctors authorizing his release should be satisfied that the patient is of sound mind. They should also be satisfied that the patient is fully conscious and made aware of his condition, as well as the nature and purpose of the proposed treatment or surgery, and the probable consequences of his refusal to submit to it. The patient should then be asked to sign a statement showing the recommendations of the doctors and his refusal to submit to the treatment or surgery. The statement should be written to release the hospital and doctors from liability for any injury that may result.

If the hospitalized patient refuses to sign a release, he should still be permitted to leave, but the doctors should sign a statement showing the patient's refusal to submit to treatment or surgery, the explanations given to him, and his refusal to sign a release. Also, if there is any doubt whatsoever as to the mental competency of the patient, a specialist should be called in immediately to examine him. If the patient is found to be mentally incompetent, or if the doctors are reasonably satisfied after consulting with the specialist that the patient is incompetent, the hospital and d o c t o r s would be justified in proceeding with *surgery or treatment necessary to save the patient's life.* In cases of this kind it would be advisable to follow the procedure set for emergencies, i.e. obtaining the approval of the guardian, spouse, or next of kin whenever possible.

If a patient refuses treatment or surgery, and later loses consciousness, and his condition becomes c r i t i c a l, the case may be treated as an emergency case. It is very likely that the Courts would regard the situation as changed in this condition, since the condition is critical and the patient is unable to consult with the doctor.

Alabama Department of Public Health

Hepatitis Test Still In Developmental Stage

Thomas S. Hosty, Ph. D., Director, Bureau of Laboratories,
Montgomery, Alabama

and

Robert D. Francis, Ph. D., Consultant to Laboratories,
Microbiology Department,
University of Alabama Medical School

In recent months, a number of inquiries have been received from physicians throughout the state regarding the availability of a test for hepatitis at the Bureau of Laboratories. Because of both the local interest shown in this new procedure and the appearance of an increasing number of articles in the literature on the subject, it was considered that the distribution of this special information letter would serve to explain our position at this time.

The recently devised test for hepatitis is a relatively simple one to perform and use is made of the double-diffusion agar-gel technique. This technique was introduced by Ouchterlony and Elek[1] and has been widely applied for several years in investigations of the similarity and dissimilarity of antigens and antibodies: in principle, the antigen and antibody diffuse through an agar-gel and a precipitation line develops at a midway point where optimum concentrations of antigen and antibody react. Limitations on the sensitivity of the procedure are imposed by molecular weight of the antigen, particle size of the antigen, and concentration and degree of dispersion of antibody molecules. When applied in hepatitis infection[2], the antigen (unknown component) is the serum of a patient who has developed clinical hepatitis following transfusion of whole blood or certain blood products. It has been shown that this antigen is present in the blood of persons with a variety of clinical conditions after receipt of one or more transfusions. The source of antibody (known component) for the test has usually been "selected" sera from hemophilias or refractory anemias who have been treated with multiple transfusions over a comparatively long period of time. Presumably such individuals unknowingly receive multiple doses of the serum hepatitis (Australia) antigen and experienced either an apparent or inapparent infection.

A positive reaction in the test is definitive evidence that an individual has serum hepatitis or is carrying serum hepatitis (Australia) antigen in the blood. However, a negative reaction cannot be interpreted at this time as always indicating absence of infection for it may result from inability of the procedure to detect small but significant amounts of antigen. The sensitivity of the test has yet to be satisfactorily determined and no reproducible reference has been established for the standardization of antibody preparations used in the test. Laboratories where the procedure has been under

(Continued on Page 545)

sterile solution (300 mg. per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

and single-dose 2 ml.
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...

© The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49001

You can't fell a redwood with a hatchet
With vitamins, too, relative needs determine the choice.
A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a high potency formula will do.
THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.
Theragran®
High Potency Vitamin Formula
Theragran®-M
High Potency Vitamin Formula with Minerals
SQUIBB
"The Priceless Ingredient of every product is the honor and integrity of its maker."™
© E.R. Squibb & Sons, Inc. 1970

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

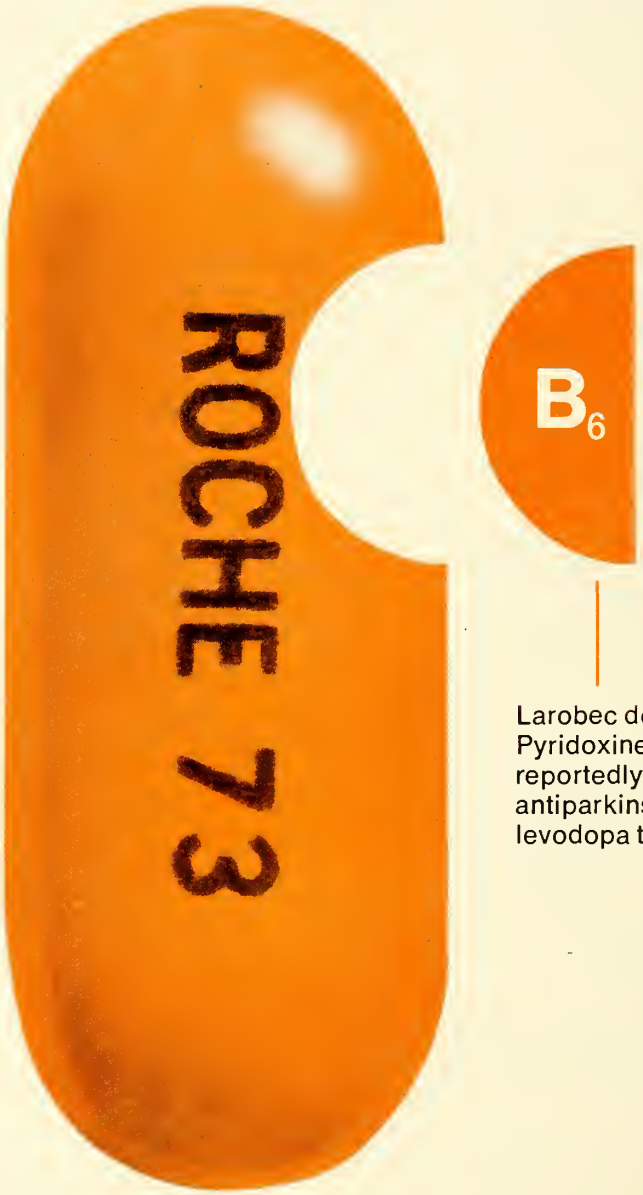
BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

the incomplete B-complex

SPECIFICALLY FOR LEVODOPA PATIENTS—NUTRITIONAL SUPPORT WITHOUT PYRIDOXINE

Larobec provides: B-complex vitamins, of particular importance to the patient who is on levodopa therapy and is deficient in water-soluble vitamins.

Larobec provides: Ascorbic acid, useful in assisting tissue repair in the debilitated patient.



Larobec does *not* provide: Pyridoxine (vitamin B_6)—which reportedly reverses the antiparkinson effects of levodopa therapy.[1,2]

Larobec™ Tablets

A high-potency nutritional supplement specific to the needs of patients with Parkinson's disease and syndrome on levodopa therapy—that describes new Larobec™ from Roche. Larobec provides the major B vitamins plus vitamin C—*but does not provide pyridoxine*. Thus, with its specially tailored formula, Larobec assures the patient important nutritional support without minimizing any of the benefits of levodopa therapy.

1. Duvoisin, R. C.; Yahr, M.D., and Coté, L. D.: *Trans. Amer. Neurol. Assoc., 94*:81, 1969.
2. Cotzias, G. C.: *J.A.M.A., 210*:1255, 1969.

Complete Prescribing Information:
Each Larobec tablet contains:
Thiamine mononitrate (vitamin B_1) 15 mg
Riboflavin (vitamin B_2) ..... 15 mg
Niacinamide .....100 mg
Calcium pantothenate ..... 20 mg
Cyanocobalamin (vitamin B_{12}) ... 5 mcg
Folic acid ..... 0.5 mg
Ascorbic acid (vitamin C) .....500 mg

Description: For prophylactic or therapeutic nutritional supplementation concomitant with levodopa therapy in patients with Parkinson's disease and syndrome, Larobec provides high potency dosages of the major B-complex vitamins, without pyridoxine (vitamin B_6) which has been reported[1,2] to reduce the clinical benefits of levodopa therapy. B-complex vitamins are essential in the anabolism of carbohydrate and protein and in hematopoiesis. Larobec also contains therapeutic quantities of ascorbic acid, a substance involved in intracellular reactions such as tissue repair and collagen formation.

Indications: Larobec is indicated for supportive nutritional supplementation when a water-soluble vitamin formula (without pyridoxine) is required prophylactically or therapeutically in patients under treatment with levodopa.

Warning: Administration of vitamin B_6 may be required if signs of pyridoxine deficiency develop. Larobec is not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage and Administration: One or two tablets daily, as indicated by clinical need.

How Supplied: Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.

References:
1. Duvoisin, R. C., *et al.*: *Trans. Amer. Neurol. Assoc., 94*: 81, 1969.
2. Cotzias, G. C.: *J.A.M.A., 210*:1255, 1969.

high-potency nutritional support for the levodopa patient

Larobec™

ROCHE Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

(Continued from Page 540)

investigation have used arbitrary standards and depended upon mutual exchange of research reagents.

Sufficient evidence is now available to indicate that the test is of value only in the detection of cases of serum hepatitis or of individuals in whom the antigen may persist in the blood for extended periods; the relationship of this antigen to the agent of infectious hepatitis requires further study.

It would appear that the test has more significant application in blood bank screening of donor blood than in the detection of sporadic clinical cases of hepatitis, since the latter can be accomplished by correlation of carefully obtained epidemiological history, clinical findings, and laboratory determination of serum glutamic oxalacetic transaminase (SGOT) levels. The appearance of detectable antigen in the serum of hepatitis patients seems to precede the elevation of SGOT levels by approximately 8-10 days[3].

It is our opinion that the test should be considered as still in the developmental stage and, therefore, not ready for unrestricted application on a routine basis. You may rest assured that the Bureau of Laboratories will continue to review new developments with the test. When the limits of sensitivity have been defined and standardized reagents become commercially available which will enable the performance of a reproducible diagnostic test, the service will be made available to the physicians of the state.

References

1. Crowle, A. J., Immunodiffusion, 1961, Academic Press, Inc., New York.

2. Blumberg, B. S., Sutnick, A. I., and London, W. T., Special Communication: Australia Antigen and Hepatitis. J. A. M. A., 207:1895, 1969.

3. Giles, J. P., McCollum, R. W., Berndtson, L. W., and Krugman, S., New Eng. Jour. Med., 281:119, 1969.

The Month in Washington

From the Washington Office
American Medical Association

The federal government now has the authority to expand the U. S. Public Health Service to provide direct services in ghettos and rural areas where there are shortages of physicians and other health personnel, provided the state and local medical society certify that it is needed.

The Senate approved the authorizing legislation, 66 to 0, and the House by an almost unanimous voice vote. President Nixon signed it into law on Dec. 31.

The legislation authorized $10 million for the current fiscal year ending next June 30, but the funds must still be appropriated.

In its report approving the legislation, the House commerce committee expressed a hope that it would help revitalize the PHS which the Nixon Administration reportedly has been planning to further downgrade, or even eliminate, in a reorganization of the health activities of HEW.

Physicians enlisting in the program will become PHS commissioned officers and, as such, be exempt from the military draft.

The HEW secretary has the responsibility of determining, after consultation with local officials and health groups, what areas need such a program, and then assigns PHS officers there.

The new law — the "Emergency Health Personnel Act of 1970"—also provides for the establishment of a 15-member National

(Continued on Page 548)

Brief Summary of Prescribing Information– 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

(Continued from Page 546)

Advisory Council on Health Manpower Shortages. It will include three members from the health professions, three members from state health or health planning agencies and four from the general public representing consumers of health care.

* * *

Three major reports before the federal government urge extensive programs to combat cancer and heart disease.

A special panel of 26 expert consultants, in a report to the Senate Labor and Welfare Committee, urged a multi-billion dollar crusade against cancer in an effort to erase its "staggering" impact of death and suffering caused by the disease.

The National Advisory Cancer Council urged increased educational efforts by both governmental and private agencies to warn the public against the hazards of smoking.

The Inter-Society Commission for Heart Disease Resources recommended a program that would promote drastic changes in the nation's dietary habits, elimination of cigarette smoking and research into the causes of high blood pressure.

Based on a four-month study, the cancer report to the senate committee included an estimate that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

The consultants recommended a sweeping program keyed to consolidation of all existing cancer research projects into a national cancer authority directly responsible to the president.

The report recommended doubling cancer research spending to $400 million in the 1972 fiscal year.

The panel of consultants, which included labor and civic leaders as well as distinguished cancer researchers, said that the program should be devoted primarily to research into the causes and cures of cancer, rather than to patient care.

New Nilcol- A Comprehensive Formula:

DESCRIPTION	Contents in mg Tablet	Elixir— each 15 ml
phenylpropanolamine HCl	50	25
chlorpheniramine maleate	4	2
glyceryl guaiacolate	200	100
dextromethorphan HBr	30	15
alcohol		10%

The scored, elliptical tablet is light violet. The elixir is deep violet in color and grape-flavored.

ACTIONS Each component of Nilcol has been selected to provide symptomatic relief of congestion and cough in upper respiratory disorders.

Phenylpropanolamine hydrochloride is a vasoconstrictor which reduces congestion of the nasopharyngeal mucosa. Chlorpheniramine maleate, a widely used antihistamine, helps to control allergic symptoms. The expectorant is glyceryl guaiacolate which helps to increase the secretion and decrease the viscosity of fluids of the respiratory tract. Dextromethorphan is a well-known, centrally acting antitussive. Nilcol may minimize the need for topical decongestants.

INDICATIONS Nilcol is indicated for nasal and bronchial congestion; coughs and other symptoms of respiratory infections including influenza and the common cold; other respiratory conditions such as sinusitis, allergic rhinitis or hay fever.

CONTRAINDICATION Hypersensitivity to any ingredient.

PRECAUTIONS Because of the possibility of drowsiness, patients should be cautioned against driving and operating machinery. Administer with caution to patients with hyperthyroidism, hypertensive cardiovascular disease, diabetes mellitus and liver disease. Use in pregnancy is not recommended.

ADVERSE REACTIONS Anxiety, restlessness, tension, insomnia, tremor, weakness, headache, vertigo, sweating, nausea, and vomiting may possibly occur.

SUPPLIED Tablets in bottles of 100. Elixir in bottles of 32 fl oz (1 qt) with dosage cups. N-GP-11-4C

WARNER-CHILCOTT
Morris Plains, New Jersey 07950

This is a test of this publication's advertising "Exposure." Please see below.

Introducing The Fully Therapeutic "Age-Calibrated" Non-Narcotic Cough/Cold Formula... For Any Member Of The Family*

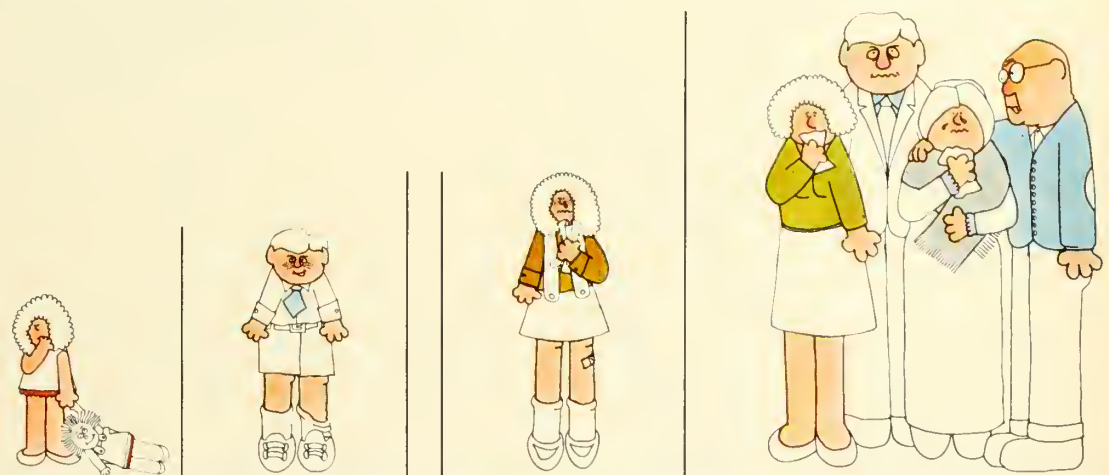
*Not for infants under 2 years of age.

New Nilcol™ Rx Tablets/Elixir

Each scored tablet contains: Phenylproponolamine HCl 50 mg, Chlorpheniramine maleate 4 mg, Glyceryl guaiacolate 200 mg, Dextramethorphon HBr 30 mg.
Each 15 ml of elixir contains: Phenylproponolamine HCl 25 mg, Chlorpheniramine maleate 2 mg, Glyceryl guaiacolate 100 mg, Dextramethorphan HBr 15 mg, alcohol 10%.

An Expectorant • An Antihistamine
A Decongestant • A Non-Narcotic Antitussive

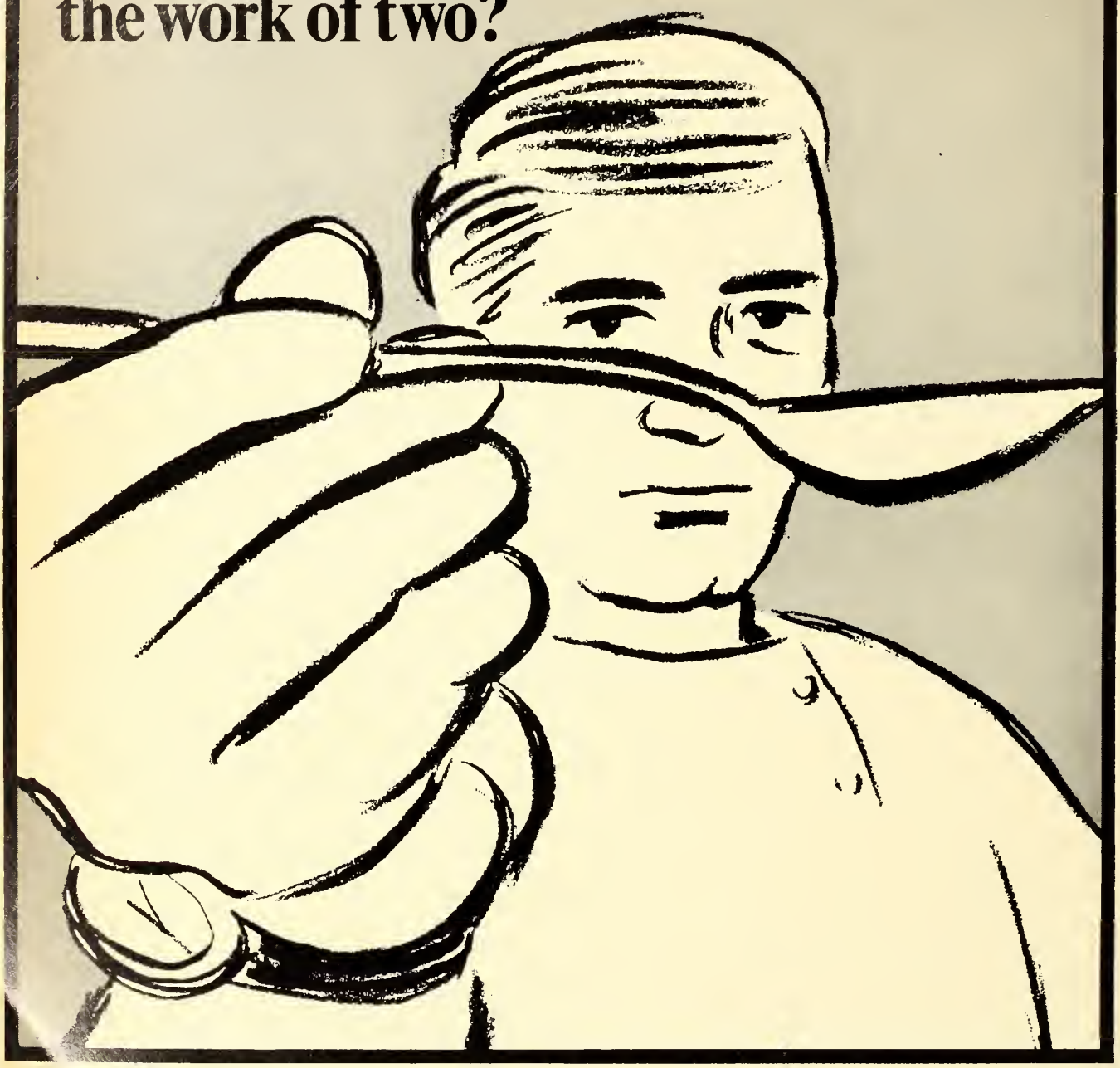
For a complimentary package, send your Rx with the name Nilcol written on it to:
Warner-Chilcott Laboratories, 201 Tabor Road, Morris Plains, New Jersey 07950.
Att: M. Adams, St.J.



	youngsters 2 to 4	youngsters 4 to 6	youngsters 6 to 12	grown-ups
Prescribe 3 or 4 times daily				
Quick-Snap-Apart **Tablets**			½ tablet	one tablet
Delicious, Grape-Flavored **Elixir**	5 ml (1 tsp) †	10 ml (2 tsp)	½ oz (1 tbs)	1 oz (2 tbs)
Rx (4 days—no-waste therapy)	3 oz	6 oz	8 oz	16 oz

†Plus "Age-Calibrated" Medicine Cup for Precision-Assured Dosage.

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain aluminum hydroxide/magnesium hydroxide, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

9-2572 (2172)

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

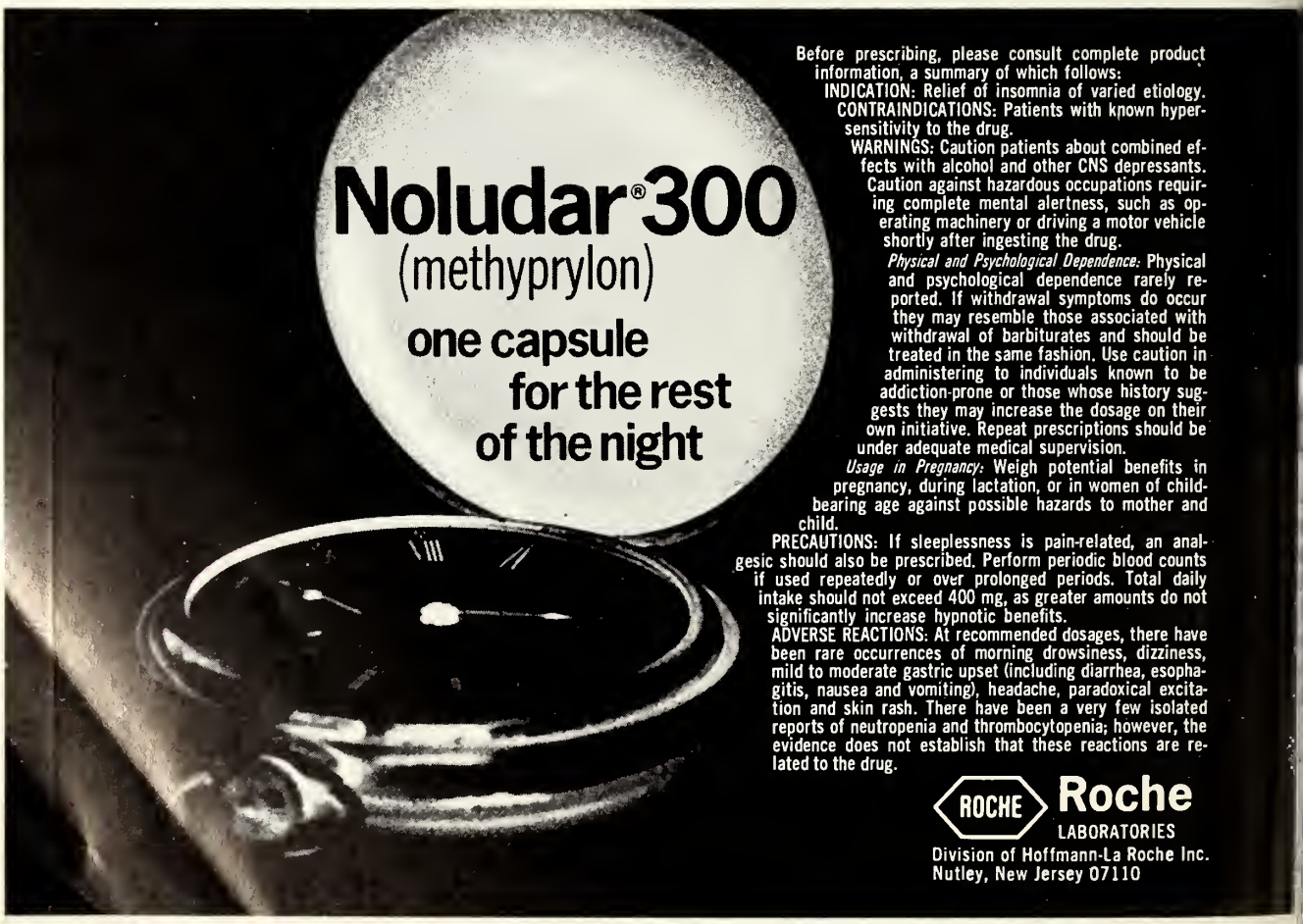
Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

INDEX TO ADVERTISERS

Arch Laboratories	536
Blue Cross-Blue Shield	535
The Bradley Center	551
Breon Laboratories	500
Bristol Laboratories	530, 531, 546, 547
Burroughs Wellcome	543
Campbell Soup Company	511
C. B. Fleet	527
Geigy Pharmaceuticals	487
The Guest House Motel	523
Highland Hospital	498
Hoechst Pharmaceuticals	521
Lederle Laboratories	489
Eli Lilly and Company	1st cover, 502
Medicenters of America	3rd cover
Medi-Com	497, 499, 501
Wm. S. Merrell	550
Merck, Sharp & Dohme	532, 533
National Drug	517, 518, 537, 538
Wm. P. Poythress	514
A. H. Robins & Co.	493, 494, 495
Roche Laboratories	2nd cover, 485, 528, 529, 544, 545, 552, 4th cover
G. D. Searle	512, 513
Smith Kline & French	522
Squibb	542
Stuart Pharmaceuticals	524, 525
Upjohn	541
Warner-Chilcott Laboratories	548, 549



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

t's available because of Medicenter.

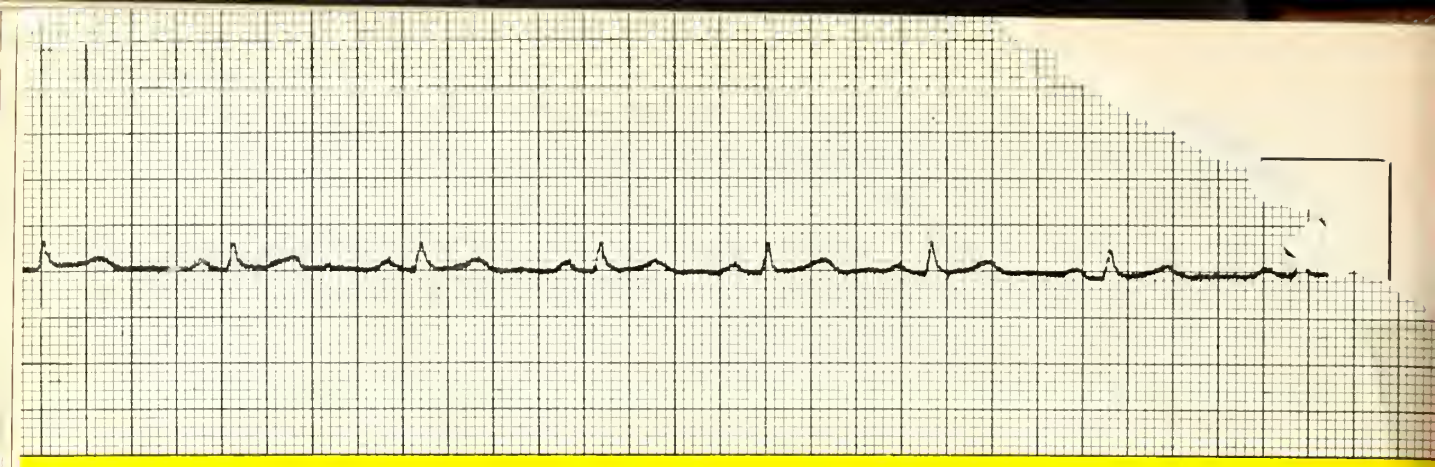
cause of Medicenter, this hospital bed can be used someone who needs it. That's what Medicenter is bout. A recuperative care facility specializing in the s of patients who no longer require the intensive care general hospital and who are on the road to recovery. t that's only part of the Medicenter story . . . Beauti- carpeted and draped patient rooms, tasty foods, rec- n facilities, physical and inhalation therapy are a few of many luxurious health care features that recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDiCENTER
OF AMERICA

A Nice Place to Get Well

Medicenter of America / Mobile, Alabama 36607



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

JOURNAL of the Medical Association of the State of ALABAMA

DISPLAY UNTIL 1873 THE MEDICAL

IN THIS ISSUE

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
26 MAR 1971

Management of Rheumatoid Arthritis - A New Look 567

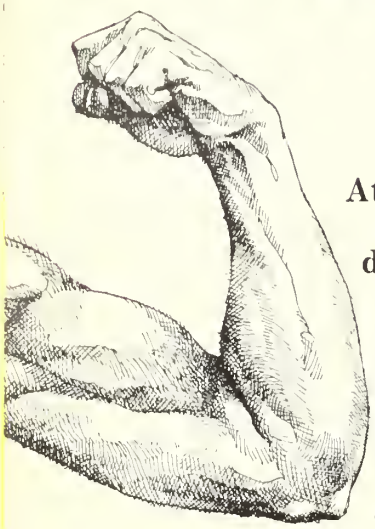
Common Misconceptions in Inhalation Therapy Part III 569

Continuing Graduate Education 590

Francis A. Countway Lib. of Medicine
10 Shattuck St.
Boston, Massachusetts 02115

MARCH 1971

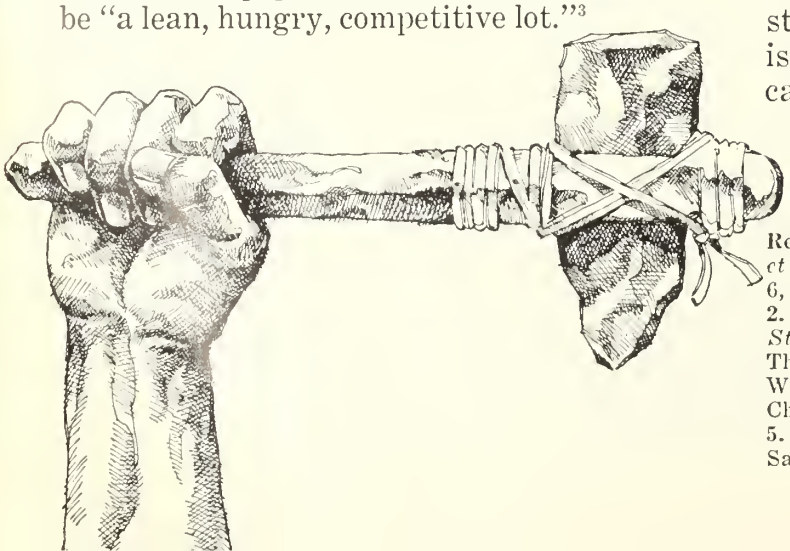
IF MORE MEN CRIED



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



Big boys don't cry. If more men crie maybe fewer would wind up with duoden ulcers. But men will be men—the sum total their genes and what th are taught. Schottstae observes that when mother admonishes h son who has hurt himse that big boys don't cry, sl is teaching hi stoicism.[4] Crying is t negation of everythir society thinks of as manl A boy starts defending h manhood at an early ag

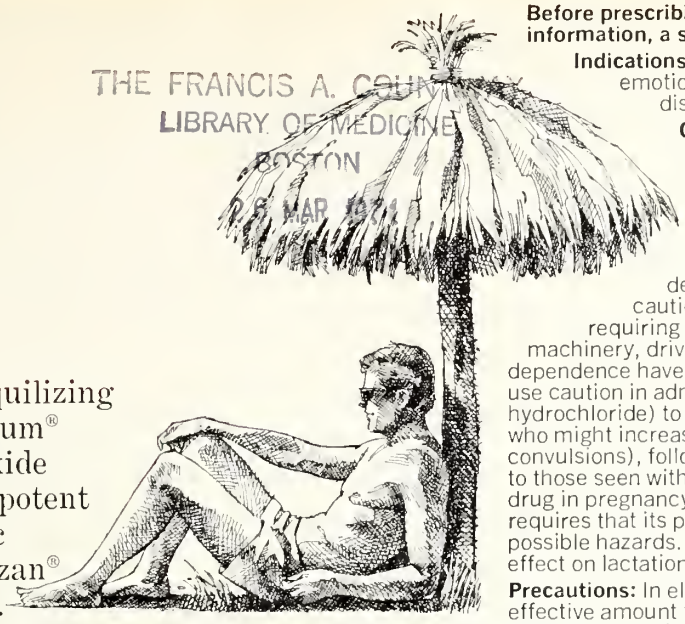
Take away stres you can take away symptom

There is no question that stress plays role in the etiology of duodenal ulce Alvarez[5] observes that many a man with a ulcer loses his symptoms the day he shuts u the office and starts out on a vacation. T problem is, the type of man likely to have a ulcer is the type least likely to take lon vacations or take it easy at work.

The rest cure vs. the two-way action o Librax.® For most patients, the rest cure as unrealistic as it is desirable. Still, t stress factor must be dealt with. And he is where the dual action of adjunctive Libra can help. Librax is the only drug that com

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. M *et al.* (eds.): *Harrison's Principles of Internal Medicine,* 6, New York, McGraw-Hill Book Company, 1970, p. 14 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolf Stress and Disease,* ed. 2, Springfield, Ill., Charles Thomas, 1968, pp. 68-69. 3. *Ibid.,* p. 257. 4. Schottstae W. W.: *Psychophysiologic Approach in Medical Practi* Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 1 5. Alvarez, W. C.: *The Neuroses,* Philadelphia, Pa., W. Saunders Company, 1951, p. 384.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
MAR 1974

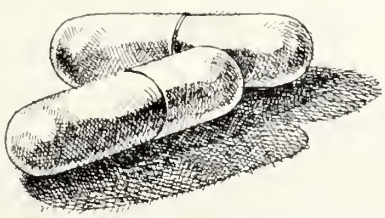


es the tranquilizing
ion of Librium®
lordiazepoxide
l) with the potent
icholinergic
ion of Quarzan®
dinium Br).

Protects man from his own hungry per-
ality. The action of Librium reduces
iety—helps protect the vulnerable patient
m the psychological overreaction to stress
t clutches his stomach. At the same time,
action of Quarzan helps quiet the hyper-
ive gut, decreasing hypermotility and
ersecretion.

An inner healing environment with 1
2 capsules, 3 or 4 times daily. Of course,
re's more to the treatment of duodenal
er than a prescription for Librax. The pa-
nt—with your guidance—will have to ad-
t to a different pattern of living if treat-
nt is to succeed. During this adjustment
iod, 1 or 2 capsules of Librax 3 or 4 times
ly can help establish a desirable environ-
nt for healing.

Librax: It can't change man's nature.
t it can usually make it easier for men to
e with the discomfort of stress—both
chic and gastric—that can precipitate
l exacerbate duodenal ulcer.
rax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

in the treatment of duodenal ulcer

adjunctive

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • March, 1971 • No. 9

Office of Publication

19 So. Jackson St. — Montgomery, Ala. 36104

Subscription Price — $5.00 Per Year

$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief

William L. Smith, M. D. — Montgomery

Managing Editor

L. P. Patterson — Montgomery

Assistant Managing Editor

Mary Nell Williford — Montgomery

Publications Committee

Archie E. Thomas, M. D., Chairman — Montgomery
C. Kermit Pitt, M. D. — Decatur
H. H. Hutchinson, M. D. — Montgomery
William L. Smith, M. D. — Montgomery
L. P. Patterson — Montgomery

Officers of the Association

President

O. Emfinger, M. D. — Union Springs

President-Elect

A. E. Thomas, M. D. — Montgomery

Vice-Presidents

F. M. Phillippi, Jr., M. D. — Brewton
J. E. Cameron, M. D. — Alexander City
Wood S. Herren, M. D. — Birmingham

Secretary-Treasurer

William L. Smith, M. D. — Montgomery

Executive Director

L. P. Patterson — Montgomery

The State Board of Censors

John M. Chenault, M. D., Chmn. — Decatur
J. P. Collier, M. D. — Tuscaloosa
Paul W. Burleson, M. D. — Birmingham
L. L. Hill, M. D. — Montgomery
M. Vaun Adams, M. D. — Mobile
J. D. Bush, M. D. — Gadsden
E. L. Strandell, M. D. — Brewton
John W. Davis, Jr., M. D. — Montgomery
J. Garber Galbraith, M. D. — Birmingham
H. G. Hodo, M. D. — Fayette

State Health Officer

Ira L. Myers, M. D. — Montgomery

Delegates and Alternates to the American Medical Association

(Terms expiring December 31 of year shown.)

1971

Delegate—M. Vaun Adams, M. D. — Mobile
Alternate—E. L. McCafferty, Jr., M. D. — Mobile

Delegate—P. W. Burleson, M. D. — Birmingham
Alternate—Robert Parker, M. D. — Montgomery

1972

Delegate—E. Bryce Robinson, Jr., M. D. — Fairfield
Alternate—W. E. White — Anniston

CONTENTS

President's Page — 556

The Woman's Auxiliary — 558

Editorial Comment — 565

- You Might Try this On Your Computer — 565
- Fathers With Sons In Veterinary Medicine! — 568

Scientific Section — 567

- Management of Rheumatoid Arthritis —A New Look, Howard L. Holley, M. D., Birmingham — 567
- Common Misconceptions in Inhalation Therapy, Part III, Air Flow, Pressure and Turbulence, D. S. Tysinger, Jr., M. D., Dothan — 569

Around the State — 583

- Vital Statistics — 583

Fathers and Sons in Medicine — 587

- 8 In Blake Family Practice in 2 States — 587

Association Forum — 590

- Continuing Graduate Education, Arthur M. Freeman, Jr., M. D. — 590

Alabama Department of Public Health — 613

- A Review Of The Program For The Detection of Genetic Diseases In The Public Health Laboratory — 613

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone USP

Makes water, not waves.

You know diuretics medically.

But have you met them socially?

yte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

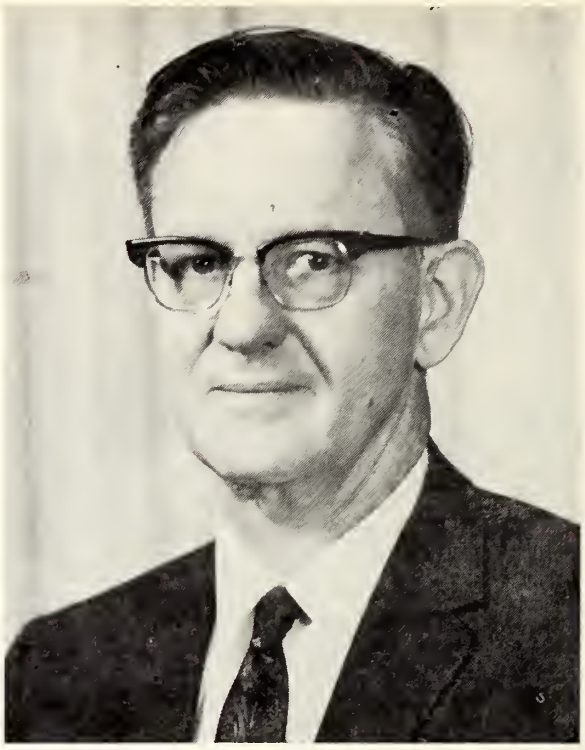
n® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* nsitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which e used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and ion) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium ients immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result r neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of ring age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic nation of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte ce, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and m supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, , constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic sion, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, cytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and itis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of nds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please complete prescribing information.*

Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

President's Page

PEER REVIEW



O. Emfinger, M. D.

Traditionally, in the United States judgment by one's peers has been the very backbone of our judicial system, both criminal and civil. It is true that the system has faults just as individuals who participate in the system have individual faults, but even with its faults, there are very few of us who would be willing to give up the guarantees of this system for any other judicial system. Today, in the practice of medicine, judgment by one's peers is becoming a very important concept applicable to many facets of the practice of medicine.

Judgment by our peers is not something new in medical practice. The scope of its application is simply being broadened very fast. Traditionally, a physician's peers determine whether he is accepted or rejected for staff privileges at any given hospital and if accepted, judgment of his peers determines the extent of his activities in the hospital. For several years in many of the larger hospitals, tissue committees, utilization committees and various other committees have sat as a Board of Peers to determine activities of various staff members. So the concept of Peer Review is not new.

Grievance committees for some time have been established to act as Peer Review Boards. Now with very broad physician participation in federally financed medical care programs, Peer Review is becoming even more comprehensive. Whether we as individual physicians like it or not, we must accept the fact that there must be some mechanism to arbitrate charges made by physicians, or payments allowed by third parties, when either party is dissatisfied with the fee. It is unrealistic to expect the Federal or State Government to expend billions of dollars for medical care without having some control over fees charged. If payment is on a reasonable, usual and customary basis, there must be some method to determine that fees are actually charged on that basis. I feel confident that most physicians do not abuse a reasonable and customary fee schedule. But in those circumstances where there is abuse or where the third party carrier feels that there is an abuse, there must be some way to arbitrate. There is certainly no better method of arbitration as far as practicing physicians are concerned than a Peer Review Board.

Several months ago there was established in Alabama by the Medical Association of the State of Alabama a Peer Review system. There has been only limited utilization of this system to date, but it has functioned frequently enough to see that there are some deficits in the system, but at the same time, it has been demonstrated that the concept is workable. It behooves us to constantly work toward a more effective Peer Review system; one which is fair to all parties alike. Of course, we as physicians do not like to admit our fees are excessive or unfair, but I know of no more acceptable group to decide on a fee controversy than a group

of our Peers, a group of practicing physicians in our community. Our Peer Review mechanism must work effectively and fairly for all concerned. It must be demonstrated to be equitable to the extent that all parties are willing to accept the Peer Review Board's decision as final and binding in all cases.

There are those in the Federal bureaucracies who would be very pleased to have no physician Review Boards deciding on fees, utilization and even professional proficiency. Such a situation could very easily produce chaos in the practice of medicine in this country. In the immediate future, our attitude toward Peer Review, our effectiveness in establishing equitable Peer Review organizations, and our willingness to accept the decision of our Peers on such Boards may well be a very important, and even a determining factor, in what type of delivery of health-care we have in the future. I do not believe there is a single facet of medical practice which will impress our Federal legislators any more favorably than medicine's willingness to pass judgment on its own membership, and to me, it is incomprehensible that a physician would not be willing to accept the judgment of his Peers.

O. Emfinger, M.D.

O. Emfinger, M. D.
President
The Medical Association
of the State of Alabama

You Work For The Government

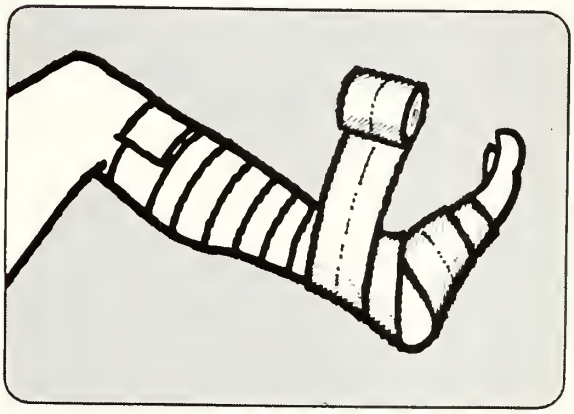
Employed Americans worked two and a half hours every eight-hour working day in 1969 to pay their tax bills—federal, state and local, according to tax experts of the Chamber of Commerce of the United States. The 10% surtax accounted for a big jump in federal taxes, but state and local taxes also showed a distinct upward trend.

—ISMA Journal

PRIMER®

PLUS

Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

EDWARD TAYLOR Ltd.
A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name ..... M.D.

Address .....

City .....

State ..... Zip .....

The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

It is a pleasure to report the success of another Health Careers Congress. This meeting, co-sponsored by the Woman's Auxiliary to the Medical Association, Alabama League for Nursing, Alabama State Nurses Association, and the Health Careers Council of Alabama, was held in Montgomery on February 4 and 5 at the Jefferson Davis Hotel. This event is an approved function for high school students. It is indeed gratifying to know that hundreds of Alabama students come to this Congress, all displaying an enthusiastic interest in pursuing careers in health related fields. The keynote address, "Alabama's Pollution Problems and What is To Be Done" was given by The Honorable Jere Beasley, Lt. Governor. The agenda also included films on pollution, films on specific health career areas, a Health Careers Poster contest, a Health Careers Fair (exhibits), a banquet, dance and election of officers. We can be proud of our efforts in promoting Health Careers.

I have been busy traveling throughout the state visiting with the Auxiliaries of Mobile, Covington, Pickens, Jackson, Jefferson-Bessemer, Lauderdale, Madison, Marion, Morgan-Lawrence and Talladega counties. The accomplishments of these Auxiliaries are tremendous. They have not only striven to complete their year's goals, but also have given untiringly of their time to other service organizations. These activities truly improve the image of medicine.

March is here, and brings with it the burst of Springtime. The whole world seems to come alive, and so it is with your Auxiliary. We are excited about the plans for the Convention to be held in Birmingham next month. The Convention has been in the

Mrs. Howard C. Johnson

capable hands of Mrs. Robert Grady, Chairman, and Mrs. Homer Crandall, Co-chairman. Members of both Jefferson-Birmingham, and Jefferson-Bessemer Auxiliaries are working together to make this the greatest convention ever.

I do hope many of you and members of your family will participate in the Exhibits at the convention by bringing your hobbies for display. Mrs. James C. Johnson, Archives and Exhibits Chairman, is counting on a record number of entries for the many awards to be given.

Each county president was asked to send

(Continued on Page 562)

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDiCENTER
OF AMERICA
*
A Nice Place to Get Well

Medicenter of America / Hopkinsville • Louisville, Kentucky

Efudex®
(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses–
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completely. Residual mild erythema remains in some areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N J 07110

An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 57 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

new
Efudex®
(fluorouracil)
cream/solution

(Continued from Page 558)

me a typed report of her Auxiliary's activities and accomplishments for 1970-71. These reports are to be copied and put into book form to be distributed to those attending the convention. This will be the first time this has been done, and I do feel they will be of great value to the newly elected county presidents. There never is enough time during the convention for each county to report a *full* year's work, so they are asked to report on only one outstanding project. These booklets will enable everyone in the Auxiliary to read in detail the activities going on throughout the state.

This Auxiliary year is fast coming to a close. As I have read these county reports, I have realized many of our dreams have become realities! I also realize the teriffic amount of teamwork which has gone into each endeavor. Nothing worthwhile, however, is ever accomplished by only one. Each needs the cooperation of others.

I will look forward to seeing many of you and your wives at the convention next month.

Camille Johnson

A Name, By Any Other Sneeze

The Edsel is thought to have failed in part because of its uninspiring name—no fuel for the Walter Mitty fire that burns in each car-owner's breast, etc. The American grizzly bear's real name is Ursus horribilus, which to us sounds just perfect. But who was the botanical joker who named that nefarious of weeds, the common ragweed? Ambrosia artemesifolia, indeed! Something to think about while you're sneezing.

—Delaware Medical Journal

New Nilcol- A Comprehensive Formula:

DESCRIPTION	Contents in mg Tablet	Elixir—each 15 ml
phenylpropanolamine HCl	50	25
chlorpheniramine maleate	4	2
glyceryl guaiacolate	200	100
dextromethorphan HBr	30	15
alcohol		10%

The scored, elliptical tablet is light violet. The elixir is deep violet in color and grape-flavored.

ACTIONS Each component of Nilcol has been selected to provide symptomatic relief of congestion and cough in upper respiratory disorders.

Phenylpropanolamine hydrochloride is a vasoconstrictor which reduces congestion of the nasopharyngeal mucosa. Chlorpheniramine maleate, a widely used antihistamine, helps to control allergic symptoms. The expectorant is glyceryl guaiacolate which helps to increase the secretion and decrease the viscosity of fluids of the respiratory tract. Dextromethorphan is a well-known, centrally acting antitussive. Nilcol may minimize the need for topical decongestants.

INDICATIONS Nilcol is indicated for nasal and bronchial congestion; coughs and other symptoms of respiratory infections including influenza and the common cold; other respiratory conditions such as sinusitis, allergic rhinitis or hay fever.

CONTRAINDICATION Hypersensitivity to any ingredient.

PRECAUTIONS Because of the possibility of drowsiness, patients should be cautioned against driving and operating machinery. Administer with caution to patients with hyperthyroidism, hypertensive cardiovascular disease, diabetes mellitus and liver disease. Use in pregnancy is not recommended.

ADVERSE REACTIONS Anxiety, restlessness, tension, insomnia, tremor, weakness, headache, vertigo, sweating, nausea, and vomiting may possibly occur.

SUPPLIED Tablets in bottles of 100. Elixir in bottles of 32 fl oz (1 qt) with dosage cups. N-GP-11-4C

WARNER-CHILCOTT
Morris Plains, New Jersey 07950

This is a test of this publication's advertising "Exposure." Please see below.

Introducing The Fully Therapeutic "Age-Calibrated" Non-Narcotic Cough/Cold Formula... For Any Member Of The Family*

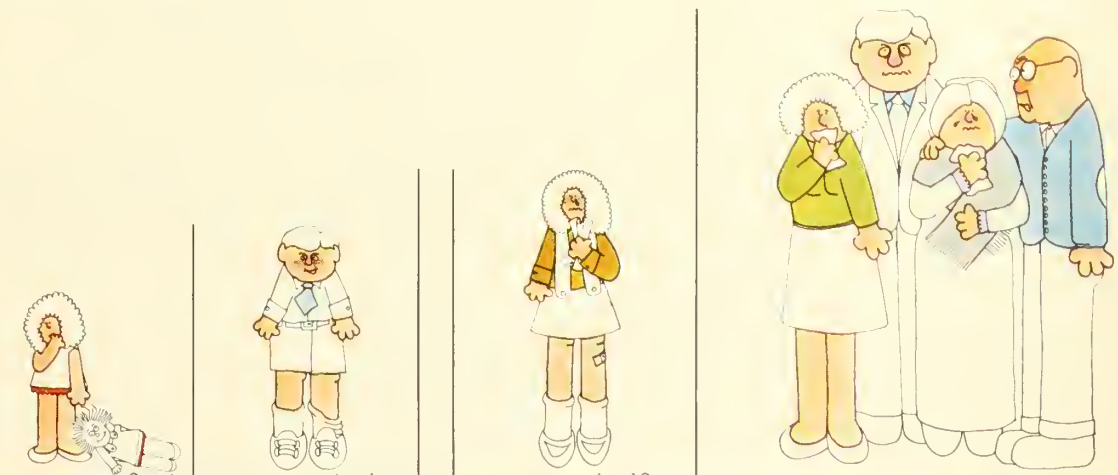
*Not for infants under 2 years of age.

New Nilcol™ Rx Tablets/Elixir

Each scored tablet contains: Phenylpropanolomine HCl 50 mg, Chlorpheniromine maleate 4 mg, Glyceryl guaiacolate 200 mg, Dextramethorphan HBr 30 mg.
Each 15 ml of elixir contains: Phenylpropanalamine HCl 25 mg, Chlorpheniramine maleate 2 mg, Glyceryl guaiacolate 100 mg, Dextramethorphan HBr 15 mg, alcohol 10%.

An Expectorant • An Antihistamine
A Decongestant • A Non-Narcotic Antitussive

For a complimentary package, send your Rx with the name Nilcol written on it to:
Warner-Chilcott Laboratories, 201 Tabor Road, Morris Plains, New Jersey 07950.
Att: M. Adams, St.J.



	youngsters 2 to 4	youngsters 4 to 6	youngsters 6 to 12	grown-ups
Prescribe 3 or 4 times daily				
Quick-Snap-Apart **Tablets**			½ tablet	one tablet
Delicious, Grape-Flavored **Elixir**	5 ml (1 tsp) †	10 ml (2 tsp)	½ oz (1 tbs)	1 oz (2 tbs)
Rx (4 days — no-waste therapy)	3 oz	6 oz	8 oz	16 oz

†Plus "Age-Calibrated" Medicine Cup for Precision-Assured Dosage.

"Around the World in 80 Days"...

. . .An expense-paid trip with one hitch -- a 60-day hitch in a South Viet Nam civilian hospital delivering vitally needed medical care to the people of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

Program Director
Volunteer Physicians for Viet Nam
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

Editorial COMMENT

You Might Try This On Your Computer

Is there more than a superficial parallel between health care and foreign relations?

Somewhere between 1942, when President Roosevelt pledged "full aid" to Chiang Kai-shek, and late 1945, when President Turman negotiated the defeat of Chiang and the victory of China's "simple agrarians" led by Mao Tse-tung by stopping the flow of war supplies to the Nationalist Government, the seed was planted that would burst into blood-red bloom in the icy wastes of Korea and the stinking jungles of Vietnam.

Somewhere between the benign image of "The Doctor" portrayed in the immortal painting by Sir Luke Fildes in 1892, and the malignant image of medicine as portrayed in a recent book, "The American Health Empire," that declares AMA's aim "is to keep American medicine disorganized in the interests of personal profit," the healing art became a government problem presumably to be firmly regulated.

The same foreign policy that erased China as a buffer state against the communist world, subsequently arranged the overthrow of Batista in Cuba, the making of Castro, the emasculation of the Monroe Doctrine, and a parade of incidents, each damaging to our country's world image.

Meantime, medicine, separating into specialties as the advances of science made it impossible for one M. D. to know it all, and so watering down the personal relationship between physician and patient, became at the same time a favorite scapegoat and a political issue. Doctors became Salem's witches of three centuries ago, the Inquisition's heretics of six.

A Chicago publication called "Today," in familiar present-day fashion, twisted a Medicare news item into the following news lead:

"Here's one you can try on your computer (don't try to figure it out yourself): Medicare costs are going up because doctors' fees are going up. Doctors' fees are going up because the federal government is limiting the amount they can charge Medicare patients."

Remember, this item was read by tens of thousands of Chicagoans, harried by spiraling costs, shaky economics, and wholesale frustration, all seeking simple answers and a convenient "fall guy."

It is what medical history may come to label "the battered doctor syndrome."

(Continued on Page 577)

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone® Liquid 250
Erythromycin Estolate
(equivalent to 250 mg. of base per 5-ml. teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*

Lilly

100204

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Volume 40 **March, 1971** **Number 9**

Management Of Rheumatoid Arthritis -A New Look*

Howard L. Holley, M. D.

Birmingham, Alabama

Arthritis is the nation's foremost painful and crippling disease. It is estimated there are approximately 16 million sufferers in the nation—over 300,000 of these are in Alabama. Unfortunately they are not an aggressive minority group but one by one merely "drop out" of their normal life pattern—fading from view—out of the working world—out of society, and into the shadows of isolation. Most of the people in Alabama are not aware of their plight—frequently only their families and family physicians are aware of their existence.

During the past 20 years a profound change has taken place in the nature of illness in human beings. This shift has been from diseases that killed the young—diphtheria, typhoid fever and pneumonia—to those which first cripple and cause death only after long years of disability. With this shift has come the necessity for a change in focus of treatment.

Patients with rheumatoid arthritis usually acquire the disease in the early, productive years of their life, but they may live for decades with increasing disability and handicap. The economic loss to society is astronomical, but of more immediate concern to the individual is the havoc of increasing disablement and decreasing productive employment, causing suffering for both him and his family.

Fortunately, a new attitude has been evolving in medical circles concerning the management of rheumatoid arthritis. This is a new optimism stemming from a clearer understanding of what can be done for the patient at various stages of the disease. In early rheumatoid arthritis, treatment is aimed at suppressing inflammation, relieving pain, maintaining joint mobility and preventing contractures and deformities and achieving psychological adjustment. In later stages of the diseases, treatment may attempt to do all of these things, but it must also restore lost motion and correct deformities.

With this new optimism, the physician is beginning to concern himself with more than just the immediate medical problems of his rheumatoid patient. An awareness of the impact of economic disability and an understanding of the appropriate measures to lessen physical disability are developing in the medical profession. Precise knowledge concerning the socioeconomic ramifications of this disease is virtually lacking; at this prim-

*This project is a joint undertaking of the Division of Clinical Immunology and Rheumatology of the University of Alabama School of Medicine and the Alabama State Vocational Rehabilitation Service.

itive stage in the development of this knowledge the only rational approach will be a detailed exploration of all aspects of the impact of disability on the rheumatoid patient and on society. Just as rational medical therapy depends upon a scientific approach to the body organs, rehabilitation will require an understanding of the interaction between the patient and his environment.

To lessen the economic impact on the family and society we have organized a pilot program at the Medical Center in an attempt to maintain the victims of this bizarre disease in the mainstream of life.

In collaboration with the State Vocational Rehabilitation Service we are organizing this project in which we intend to show that many of these patients can be maintained in a livelihood capacity. It can readily be seen what a boon to society would result from keeping these individuals off the public sustenance rolls for long periods of time. The project's personnel will be a small number of physicians and allied health personnel who deal with referred patients with early rheumatoid disease. In this project we hope to demonstrate the value of all the parameters of rehabilitation on retarding or halting the progressive disability accompanying this disease. We plan to use, in addition to medical management, the facilities of the social service, vocational guidance, and job evaluation training available from the State Vocational Rehabilitation Service.

Obviously we are aware of the cost of such a pilot project but we feel that by proving the ability of these disease victims to earn their own living we will more than compensate for the initial outlay of medical and rehabilitation facilities. Initially we will have to admit only carefully selected patients for this study who fulfill the requirements for aid from the State Vocational Rehabilitation Service.

Such a combined service program has been initiated in other states and in England with very good results in maintaining these individuals as wage earners.[1] Close relationship with the family physician is imperative for repeated treatment and evaluation is almost always necessary.

Towards the ends that I have outlined, I would like to appeal to the medical community of the state for support of our pilot program and for their aid in identification of patients that can most benefit from this new undertaking.

References

1. Duthie, J. J. R., et al, Annals of Rheumatic Diseases, 1955, Vol. 14, p. 133; 1957, Vol. 16, p. 411; Vol. 17, p. 359.

Art Tattles On Artists' Eyes

A British ophthalmologist who looks at an artist's painting and tells what's wrong with the artist's eyes has written a book about it. The M. D. is Dr. Patrick Trevor-Roper. His book, beautifully illustrated with color, is published by The Bobbs-Merrill Company of New York.

The "World Through Blunted Sight," with its subtitle, "An Inquiry into the Influence of Defective Vision on Art and Character," clearly describes his book, and he uses 29 color plates, 8 in monochrome, and five line drawings to illustrate it.

Myopic vision, astigmatism, color blindness or deficiency, cataracts, and squints are all reflected on the canvases of artists, whether of today, of a century or a millennium ago. Among the artists cited as examples are Botticelli, Cezanne, Degas, El Greco, Gainsborough, Goya, Rembrandt, Renoir, Reynolds, Rodin, van Gogh, Vermeer, and Whistler, along with an array of poets, philosophers, writers, composers, and a miscellaneous array including Bismarck, Charlie Chaplin, Hitler, Jack the Ripper, and George Washington.—M.

Common Misconceptions In Inhalation Therapy

Part III—Air Flow, Pressure, and Turbulence

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

There is probably nothing in medicine that is used more commonly and misunderstood more completely than air flow, how it is produced, the relationship of pressure to it, and what can be expected from it. Nowhere can one go and find the real answers to begin a basis for adequate knowledge. It is here that the false prophets of poor practice reach their ultimate of half-truths that are honestly accepted because they are better than nothing, but which hold back progress in inhalation therapy. The last two parts of this series will deal with these problems, as well as respirators, and what can be expected and why.

It is important at this point that the gas laws be reviewed; they cannot be ignored. Air is made up of molecules of nitrogen and oxygen. It is a gas and has two properties. The first is viscosity, the degree of fluidity that is responsible for resistance. It is a result of the sum total of the adhesive and cohesive forces present. Viscosity changes with temperature and pressure, and viscosity determines the friction that is produced when air flows over a surface. The second property is density. Density is the weight of the gas. Density determines the amount of medication or water particles that can be carried by the gas. Particles must displace their own weight of gas molecules to be carried (Archimedes Principle). Density also determines to a great extent the volume flow of gas through an orifice and through a tube. (Graham's Law of Diffusion and Fick's Law of Diffusion, etc.) It is important to understand adhesive and cohesive forces and density, as they relate to flow and carrying ability.

The easiest way to visualize and demonstrate the gas laws is to get a one liter container, (an IV bottle makes an ideal container). Connect to it so that there are no leaks, a 50 cc. syringe and a manometer calibrated in centimeters of water pressure, positive and negative. With the 50 cc. syringe full of air to the 50 cc. mark, place it in the system and compress it. This will produce a pressure. Since the container volume is not changed the air is being compressed. (This demonstrates Pascal's and Boyle's Laws) Check the system by holding the volume, it should remain at the same pressure. If the pressure falls, there is a leak in the system. This should be corrected. This system will contain between 1250 to 1400 cc. total volume. Next compress 5 cc. and watch the manometer. What happens? To this 1300 to 1400 cc. volume compress 5 cc., 10 cc., 15 cc., etc., and check the pressure that is produced thereby. When gas is compressed, pressures are produced. Heat the container by immersing in hot water and the pressure will be noted to increase. (Don't hold in the hot water too long as the manometer may be ruined.) As the pressure rises to 50 centimeters of water, transfer it to a bucket of ice water. The pressure will go subambient. Here one is dealing with a fixed volume of air undergoing pressure changes with changes in temperature and without any movement. Now place a partially filled balloon under the hot water. It will increase in size. Place the container under the cold water and it will get smaller. Since there is the changing elasticity of the balloon (elastic modules), this is not exactly Charles' Law. However, it is in essence a demonstration of it. (Charles' Law, Boyle's Law, Gay-Lussac's Law) Again review the gas laws, this is what is demonstrated with these simple experiments.

The inhalation therapist deals with a pa-

tient and/or a machine which produces gas flow. It is important to understand the factors that effect gas flow. Gas flow through a tube is controlled by Poiseuille's Formula. This formula states the factors involved in air flow. If one has a tube filled with air, at ambient temperature and pressure at both ends, then the gas in the tube is at rest. There is no mass movement of air toward either end. For mass flow to occur through the tube, there must be a pressure produced above, or subambient, at one end or a temperature above or below ambient. This produces a pressure gradient between the two ends of the tube and thereby causes air flow. The degree of pressure gradient will determine the rate of flow. The higher the pressure, the greater will be the flow through the tube for the same given time. The air and the tube wall form an air-tube interface. Air flow is resisted by the air in contact with the surface of the tube. This is due to friction which is due to viscosity and the degree of roughness of the surface at the air tube interface. The important factor here is the surface area in contact with air as opposed to total volume of air. A small tube that is quite long will contain little volume per unit of the tube and thus more surface area per unit of gas. This tube will therefore present more resistance to flow at the same rate than will a large tube, which has less surface area in proportion to and in contact with the volume of air. A tube that will hold one cc. of air in one centimeter length of the tube will have proportionately less air in contact with the surface per cc. of air flowing through it than will a tube that will hold one-tenth of a cc. of air in one centimeter length of the tube. Tube diameter and tube length become quite important factors in the flow of air through the tube. An important factor that has already been discussed is the viscosity of the air flowing through the tube. Thus, air flow is determined by the viscosity of the gas and the density, both of which determine its ability to be pushed by pressure modified by the tube diameter and the tube lengths and the pressure difference at the two ends of the tube. If pressure is subambient at one end and above ambient at the other, then the two add up to the pressure gradient causing flow. The rate at which this pressure difference is built up as well as the pressure will determine the rate at which air becomes turbulent in the tube. If pressure builds up slowly, then turbulence will be low. If pressure builds up suddenly, turbulence will occur rapidly.

If two bodies are in contact, be it wooden block on wooden block, automobile on road, or air against a tube, there is a force exerted between the two at the point of contact. This force tends to prevent either one from slipping over the other. This force is friction. If there is no movement, this force is *static friction.* If force is applied sufficient to make the air move through the tube, *limiting friction* has been reached. It is usually greater than the force required to keep the body in motion after the motion has started, known as *dynamic friction.* The laws of dynamic friction state that the direction of the force of friction is opposite to the direction of motion. The magnitude of force of friction is independent of the velocity. A ratio between the force of friction and normal reaction is approximately constant but is smaller than the static coefficient. Dynamic or moving friction can be classified as (1) starting friction, (2) sliding friction, (3) rolling friction, and (4) molecular friction. In dealing with gas flow down a tube, there must be a force to start flow, and this is determined as the starting friction. The air, to a certain extent, does slide over the surface of the tube. The rolling and bouncing molecules next to the tube wall produce friction. This produces the friction one sees in the gas as it moves over the tube surface.

Gas is made up of molecules that are constantly in motion. They collide against the tube wall as well as with the other molecules and bounce back and forth. These collisions are completely elastic and unrelated to the flow rate of the air or of the gas itself. Thus, when the gas is moving

down the tube, the molecules along the surface collide and bump into the molecules of the surface and since they are moving in one direction at the time this happens, the path of collision is somewhat changed. The molecules tend to bounce along like marbles bouncing down a road, and the layer of molecules at the surface are more agitated and in more lateral motion than the molecules in the central core of flow. This causes a resistance to flow which is friction, and the factor causing it is this change in activity due to the flow of the air over the surface. This produces turbulence. If the rate of flow is increased then this outer molecular layer which is already disturbed normally, begins to cause disturbance of the molecular layer next to it and proceeding likewise toward the central core. Thus, there develops a greater amount of turbulence as a result of increased flow. If rate of flow increases the amount of turbulence increases as a result of the increasing air flow molecular disturbance toward the central core of flow. The turbulent outer layer does not flow as fast as the next layer. Now, to recall Poiseuille's Formula for a moment. It should be understood that for every tube there is a maximum flow rate which the tube can handle. When flow gets above this flow rate, turbulence occurs with loss of effective flow due to the attempt at putting more air in than can be delivered out the other end of the tube. This can best be demonstrated by taking standard delivery tubing from an IPPB machine and turning the machine up to quite high flow rates without getting into difficulty in delivery. Now, use instead the small bore tubing such as that used to run a nasal catheter. Hook it on to the tube and, after arriving at a certain flow rate at which turbulence has caused a loss of effective flow in the tube, then the air will back up the pressure which will dilate the tube and will blow it off. This is due to turbulent buildup secondary to a too fast flow rate. If the small tube is tied down to the point that it cannot be blown off then, as turbulence develops, effective flows ceases, the tube acts as if obstructed, and this acts as a shut-off valve with high pressures and effective flow being stopped at this point. As turbulence is dissipated, flow will start again only to stop abruptly as it did the first time when pressure builds up. Delivery will be in this jerky manner. The same thing can be produced with negative pressure such as is produced in the alveolus in obstructive disease when it is generalized. This can best be demonstrated by drawing water through three different needles, (18,20,25) with a 20 or 50 cc. syringe. If sufficient negative pressure is produced in the syringe, then a big vacuum bubble is produced and flow is again jerky as a result of the turbulence within the tube or the needle. The flow rate causes turbulence; effective flow ceases and starts again only for the same sequence to recur. Thus, high pressure difference, no matter which end of the tube it occurs at, can and will produce loss of effective flow. Regardless of anyone's pet theory, there are factors that govern flow and turbulence and these do influence breathing equipment.

Now to consider the lungs. The first thing to try to understand is the way in which pressures are produced during breathing. At the beginning of inspiration the chest cage begins to move out and forward and the diaphragm begins to move downward and forward. This causes pull on the outer surface of the lung first and then on the alveoli. Before this process started the pressure in the alveolus was ambient. (The same as the air on the outside.) If it were not so there would have been air flow into the lungs in the resting chest cage position. As the chest cage first starts to move, the subambient pressure produced in the alveolus is small. The subambient pressure is neutralized by air flow from the bronchi. This is held momentarily until the in-coming air completely refills the alveolus and the pressure returns to ambient. As expiration begins, there is a recoil of the lungs and the chest cage so that, on expiration, the hyperambient pressure is developed more rapidly than was the

subambient pressure on inspiration. If there is narrowing of the tubes or partial obstruction of the tubes the chest cage moves just as rapidly but, due to the slowing of air flow in filling of the alveolus, a more negative pressure is developed at the alveolar level. Thus, in obstructive disease, greater negative pressures are developed in the process of alveolar filling. If there is competition between normal alveolar areas and obstructed alveolar areas, the obstructed areas will be left under-ventilated with the non-obstructed areas filling without so much pressure being produced. The ventilation of the obstructed areas will be in proportion to that which will flow at the general alveolar pressure throughout the lungs. It is impossible to build up a higher pressure in an obstructed alveolus than in a non-obstructed alveolus in the same area during inspiration. If, on expiration, narrowing occurs to the point that normal chest cage return and lung elasticity are not sufficient to empty the lungs, then muscular effort begins to come into play in the emptying process and, at this point, a more positive pressure is developed. Narrowing may occur to such an extent, as in the asthmatic, that extreme chest cage muscular effort is used to expand the chest cage during inspiration. Before air flow has produced ambient pressures in the alveolus, sudden expiratory efforts start. The massive expiratory efforts which start with the alveolar area inadequately filled cause the alveolar pressure to remain subambient until they go above ambient at extremely rapid rates. These excessive subambient and high positive pressures are maintained through inspiration and expiration with trapping of air on expiration because of turbulence to the point that it obstructs the bronchus. Air flow stops. The bronchus is obstructed. The pressure within the more central bronchus drops to zero and the pressure outside collapses the bronchus. Thus; bronchial collapse occurs with the resultant trapping of air in the alveolar area during expiration.

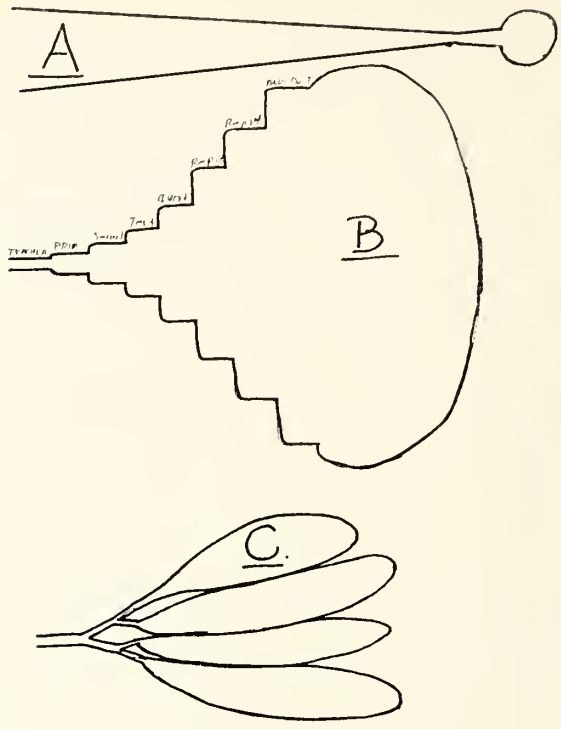


Diagram 8

The lungs have been pictured as peculiar organs in which large tubes get progressively smaller down to an elastic alveolus (as in diagram ‡8-A). To the extent that this represents the path from the mouth through one series to tubes to an alveolus, it is a somewhat correct view. Volume wise, it is an incorrect view. Findeisen and Landahl's Tables are most pertinent to this discussion. (Table IV) There is one trachea; two primary bronchi; 12 secondary bronchi; 100 tertiary bronchi; 770 quartenary bronchi; 6,000 terminal bronchiles, 15,000 respiratory bronchioles, breaking down to 300,000 first order respiratory ducts; 4,000,000 secondary respiratory ducts and alveolar ducts, and 10,000,000 alveolar sacs. Thus, though the individual diameter is getting smaller as one goes from the trachea to the alveolar area, the total volume that is contained is progressively larger. Mathematically, the volume and the size from the Findeisen and Landahl's Table shows a total lung capacity of 4,661.3 cc. Of this, the total volume of tubing—that is, the trachea and bronchi down through the respiratory ducts—is 2,538.3 cc.

Table IV

Findeisen-Landahl Table

Segment	Number of Bronchi	Length in cm	Diameter in cm	Volume in cc	Volume per cm of tubing
Trachea	1	10-12	1.3-1.6	13.3-24.1	1.3-2cc
Primary bronchi	2	6-6.5	.75-1.0	5.5-6.63	.9-1cc
Secondary bronchi	12	3	.4	15.1	5 cc
Tertiary bronchi	100	1.5	.2	62.8	41.9 cc
Quartenary bronchi	770	0.5	.15	676.8	1,353.6 cc
Terminal bronchi	6,000	0.3	.06	508.6	1,695.6 cc
Respiratory bronchi	15,000	0.15	.05	445.1	2,967 cc
1st order alveolar ducts	300,000	0.05	.03	337.5	6,750 cc
2nd order alveolar ducts	4,000,000	0.03	.025	424.5	8,490 cc
Alveoli	10,000,000				

The total alveolar volume is 2,122.5 cc. The distance air must travel in breathing in and out averages between 21.5 centimeters to 26 centimeters. The average volume of the trachea, primary and secondary bronchi, all of which are not movable, is fairly well fixed and their volume is roughly 105 cc. The bronchi beyond this point are more elastic and change in size and length with varying degrees of filling. To visualize what happens generally in breathing see Diagram ‡ 8-B. The trachea is the smallest volume area and the volume area gets progressively larger through the primary, secondary, tertiary, etc., bronchi. This means that the flow rate in the lungs progressively slows rather than increases as it goes from the trachea to the alveolus. From Findeisen and Landahl's Table the trachea on the average will hold two cc. per centimeter of trachea. If one is breathing six liters per minute, air flows through the trachea at 6,000 cc. per minute. The air flow rate through the trachea, which holds 2 cc. per centimeter of length is 3,000 cc/centimeter/minute. Due to the increase in volume air flows through the secondary bronchi at 1,300 cc/centimeter/minute. Air flow through the tertiary bronchi is 142 cc/centimeter/minute. As we get into the smaller bronchi the quartenary bronchus has an air flow of 4.4 cc/centimeter/minute. In the terminal bronchioles air flow is 3.6 cc/centimeter/minute and in the respiratory bronchioles is 2 cc/centimeter/minute. By the first order respiratory duct air flow is 0.9 cc/centimeter/minute and in the second order respiratory duct is 0.7 cc/centimeter/minute. These would be the flow rates if the full total lung capacity were delivered. The breathing volume is not sufficient to fill the total lung. However, there is marked reduction of flow rate as you go from the trachea to the alveolus. The tube size is getting smaller; the total tube volume added up is getting larger; the surface area is getting larger; and flow rate is decreasing markedly. Now, consider the breathing equipment that runs at 100 liters per minute, the flow through the trachea is now 50,000 cc/centimeters/minute instead of 3,000;

through the secondary bronchi 20,000 cc/centimeters/minute, instead of 1300; and through the tertiary bronchi 2,381 cc/centimeters/minute, instead of 142 cc/centimeters/minute of flow. These are some of the changes that are made in flow patterns in the lungs as a result of the equipment. Flow rate decreases rapidly from the trachea to the bronchi. The volume area increased markedly; the surface area increases markedly, lateral pressure increases markedly, and delivery is predicted on these principles. Usually, we think of the tracheobronchial tree as a bunch of pipes with a balloon on the end. In actuality, the bunch of pipes are the trachea, primary and secondary bronchi and, to a certain extent, the tertiary bronchi. These change very little in volume even with complete collapse of the lung. The rest do indeed change in diameter and in length in normal breathing. From here on, flow is not so much like that through a tube as it is like that into a balloon because the tubes are getting longer and longer in diameter and there is less movement over the surface than there is in filling a space. (Diagram ♯8-C) Therefore, in considering flow from the secondary bronchi on to the alveolus, rather than thinking of flow through tubing it is more physiological to think of the filling of a balloon. Thus, the volume is getting larger; the flow rate in relation to the surface is getting smaller and is made even smaller by the changes produced in length and size as a result of chest cage expansion. It is very important to understand this principle of lung function because of the translation from this principle to disease states wherein we find diseased areas usually along the tracheobronchial tree. As these disease processes progress, then there is stiffening of the tubes with much less change in diameter and length or in deed, instead of the balloon effect being in operation, there is flow through smaller tubes with turbulence causing greater negative pressure to be produced in the alveolus. This chaotic state and its production makes it much easier to understand bronchitis and the marked changes which occur physiologically. Likewise, if one understands this tube and balloon system, it is easier to understand the development of other diseases secondary to bronchitis and bronchiectasis and other irritations. Now, as an individual develops bronchitis in the smaller bronchi, the tubes stiffen and lose their elastic balloon-like action. As previously mentioned, it is necessary for the chest cage in moving the same amount of air to produce more negative pressure in the alveolus. This increased negative pressure is put on the respiratory bronchioles and alveoli primarily. The volume increase is in this area with greater negative pressures. If, at the same time, inflammation and irritation of tissue with tissue debility exist this negative pressure may be sufficient to pull these areas apart. As this occurs there develops what is known as alveolar ectasis. If the primary site of irritation, deposition or inflammation is centro-lobular then there is produced centro-lobular emphysema. If it is pan-lobular then pan-lobular emphysema occurs. The pattern of pulmonary emphysema will be dependent upon the areas chronically exposed or diseased. If the tubules are thin enough then there is difficulty on inspiration and expiration and, in addition, the area is not getting sufficient ventilation. Added to this is a certain degree of ishemia produced by stretching the capillaries in the alveolus and respiratory bronchioles more than they should be. Ishemia produced thereby aids in the breakdown of this diseased tissue. The areas that are first affected would be those areas that are most frequently ventilated in the case of exposure but not necessarily in the case of infectious disease. The difficulties with diseases, and with the breathing equipment used in correcting them, should be more understandable now. If one understands exactly how the lungs handle air and the basic way in which disease interferes with this handling of the air the remainder will be much easier.

Next, will be the discussion of pressure. Pressure is a side effect of most of the types of breathing equipment. To refer back to the original IV bottle with 50 cc. syringe and

manometer, if a pressure is to be registered by the manometer the plunger of the syringe must be pushed in sufficiently to compress enough air to produce that pressure. If the syringe at that point is pulled or pushed farther, than pressure either decreases or increases. It is impossible to produce a pressure without compressing a certain amount of v o l u m e. To produce a pressure means to compress, one cannot produce a pressure without compressing. If volume flow could be produced without developing pressure, then the treatment of disease with IPPB equipment would be easier. In the early years and the mid-fifties when IPPB machines were competing with the hand sprays, the hand sprays in all instances won out. The literature of the time proved this. The reason for this was that the hand spray delivered into the upper airway an undetermined amount of medication that was carried into the lungs by the breathing of the patient. The high flow rate machines caused flow rate turbulance in the upper airway producing obstruction. The machine recycled and did not deliver. What was not appreciated at that time was that the IPPB machine's fault was due to the extremely high flow rates with the addition of pressure to a disease process for which the flow rates were already too high. What was demonstrated was that the chief problem is a flow rate problem caused by large negative pressures at the alveolar levels producing high flow rates with turbulent obstruction of the lower, now fixed, airway before complete alveolar filling can occur. Then, a massive expiratory effort with bronchiolar collapse and trapping occurs, followed by another equally ineffective inspiration. To produce such breathing efforts a massive muscle effort with oxygen consumption and CO_2 production is required to the point that the patient panics. At this point efforts to improve the situation by tripling the inspiratory flow rate and in some instance doubling the inspiratory pressure are certainly doomed to failure. The lung diseases that an inhalation therapist can help all boil down to flow rate and volume delivery problems. The patient with flow rate problems should be sedated so that he does not make such vigorous efforts, thereby allowing air to flow at a lower flow rate with less buildup of negative pressure so that greater volume can be delivered through the narrow tubes. To ventilate diseased lung tissue without increasing air above ambient pressure at the mouth is next to impossible. Tank type respirators will not. In the process of delivery pressure does develop. The next most ideal situation is filling the area to be ventilated completely before any significant pressure is developed. Following this pressure develops after complete filling, and volume compression rather than secondary to flow rate obstruction. This can only be done by flow rate control. What is not desired is the development of pressures during early inspiration which is due to turbulent obstruction due to high flow rates. This causes machine cycling without adequate ventilation being accomplished. The one instance where it is necessary to develop pressure before filling is in ventilating the apneic patient. Here, the pressure must be developed to push out the chest cage. This will be discussed in Article IV on Respirators. It should be pointed out at this point that pressure is a necessary evil and side effect. Take, for example, a volume cycled respirator, which has a dead space within the machine of 5,000 cc., the delivery tubing to the patient—if short—is 2,000 cc. The machine is set to deliver 800 cc. and the functional residual capacity of the patient is 2,200 cc. This gives us a total volume when pressure is developed of 10,000 cc. or 10 liters. Now, if the pressure developing for this delivery is 40 centimeters of water pressure (Table V, which was derived from compression studies of air) it is found that to produce 40 centimeters of water pressure one must compress 360 cc. per 10 liters. Thus, at the time the pressure indicator registers 40 centimeters of water, there is being developed 40 centimeters of water pressure by the compression of 360 cc. of air. This 360 cc. is absorbed purely in compression and in no way aids in delivery. There is no way we

Table V

CM H20 Pressure	cc of air compressed/L to produce pressure
5 cm H20	4.5 cc/L
10 cm H20	9.5 cc/L
15 cm H20	14.3 cc/L
20 cm H20	19.2 cc/L
25 cm H20	24.0 cc/L
30 cm H20	28.0 cc/L
35 cm H20	32.0 cc/L
40 cm H20	36.0 cc/L
45 cm H20	40.0 cc/L
50 cm H20	44.0 cc/L
55 cm H20	48.0 cc/L
60 cm H20	52.0 cc/L
65 cm H20	56.0 cc/L
70 cm H20	60.0 cc/L

can produce 40 centimeters of water pressure in 10,000 cc. volume without compressing 360 cc. of air. This being the situation, of the 800 cc. that the volume cycled machine is supposed to deliver at 40 centimeters of water pressure, it is compressing—and not delivering—360 cc. of air. This leaves 440 cc. of air to be delivered to the patient. Now the dead space of 150 cc. must be ventilated which leaves of the total 800 cc. only 290 cc. delivered. Now, suppose only 25 centimeters of water pressure is produced, then one is compressing 240 cc., which would leave us 560 cc. delivery, 150 cc. being used as dead space filling, would leave 410 cc. delivery. In other words, since a compression must occur for a pressure to be developed, then to produce the pressure registered by the machine it must compress a certain volume of air. This includes the delivery volume, the total dead space of the machine, tubing and the patient's functional residual capacity. Thus, when making all the fancy calculation in an effort to use volume cycled respirators, one must change the calculations as the peak pressure changes up and down by the amount of air compressed in order to maintain delivery. This pressure that is developed and the air that is compressed to produce this pressure will be measured on the inspiratory or expiratory side as volume delivered. As pressure dissipates, it goes from compression to flow and will be measured as volume delivered. In a machine that delivers well and has unlimited volume such as an IPPB machine, compression occurs but it is not a problem if complete filling occurs in the process of producing pressure. With an unlimited volume that amount used for compression to produce peak pressure is not important. In these machines, one might wish to figure out roughly how much is being compressed. Since the pressure is set beforehand, it is easy to figure out the number of cc's that will be compressed per liter and, by getting expiratory delivery and compression volume, compression volume can be figured. In volume cycle machines this is a problem and expiratory monitoring is not the answer because of variable volume compression. In the volume cycle machine, where pressure fluctuates, one is compressing more or less and delivering more or less in proportion to pressure changes. Pressure is, indeed not a sign of overcoming compliance because the higher the pressure goes, the smaller the volume space being ventilated with the set of the machine. One is compressing, because this is what must occur for a higher pressure to develop. Thus, as pressure begins to rise, lung compliance changing is not being overcome. (One is

merely reducing the ventilated area by a sufficient volume to compress and cause this higher pressure.) Take, for example, a machine delivering 500 cc. per minute in this 10 liter volume setup that was previously mentioned. Fifty cc. per liter is compressed which produces 60 centimeters of water pressure. It is found that the whole 500 cc. is absorbed in compression to produce the 60 centimeters of water pressure and none is delivered. It would be registered on the expiratory or inspiratory monitoring side as 500 cc. delivered. To produce this pressure in this volume there is no air left over to be delivered. Thus, it is important to understand air flow, pressure, and their application in chronic lung disease. In the process the individual should dispel some of the old ideas that sound so good and are so worthless and learn the practical and scientific basis of air flow and pressure as it is the basis of inhalation therapy.

EDITORIAL COMMENT

(Continued from Page 565)

Fathers With Sons In Veterinary Medicine!

We've come a long way since Xerxes ordered the river flogged with chains for destroying the pontoon bridges built for his army.

Or have we?

We are condescending toward—and perhaps a little contemptuous of—the ancient surgeon for whom a compound fracture invariably meant an amputation, and who supplemented his modest income by cutting hair and pulling teeth. Nor are we much more respectful of the Army doctor of World War I, who had as the principal tools of his trade a cathartic compound and iodine.

Is malpractice litigation evidence of civilization's progress? Or isn't it more truly further evidence of a reversal of progress, a retreat from civilization?

The M. D. of 1918 was doing the best he could with the tools with which scientific discovery armed him. Knowing that he was doing his best with what he had, any jury in the land would have laughed out of court any suit against him by a disappointed patient.

Isn't it much more appropriate, in search for a parallel, to look farther back in history to the day when medicine men put on horror masks to frighten evil spirits away, and paid with their lives for losing a patient of social, civil or military consequence?

Is it any wonder that in this day—of acute doctor shortages everywhere, of skyrocketing liability insurance rates, and with a court docket jammed with suits in pursuit of damages for medical mistakes and "great mental anguish"—that so many doctors' sons are going into veterinary medicine?

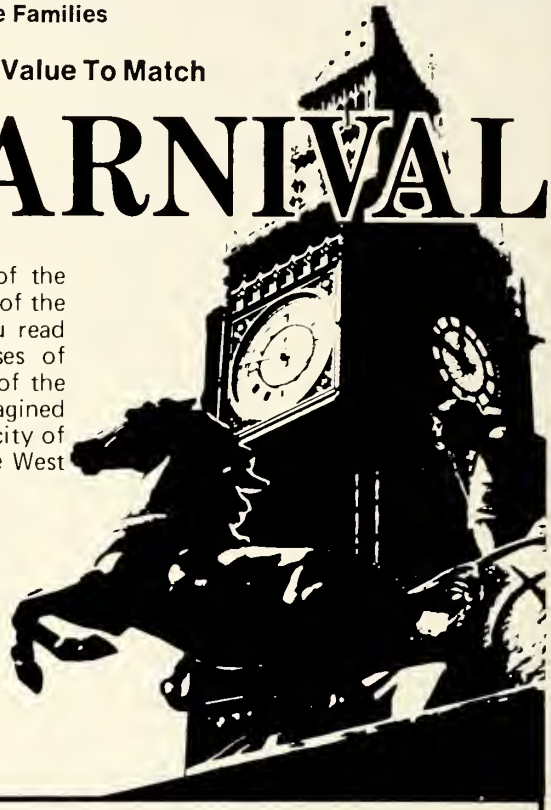
Now Available To Members Of

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

And Their Immediate Families

Never Before a Vacation Value To Match

LONDON CARNIVAL



8 Days and 7 Nights in the History, Color and Charm of the English Capital. London starts at Piccadilly Circus (the hub of the universe to the British) and includes all those places you read about in your history books: Big Ben and the Houses of Parliament, Buckingham Palace and the colorful changing of the guard, the reverent quiet of Westminster Abbey, the imagined cigar smoke that still surrounds No. 10 Downing Street. A city of history, London is a city of life, from Shakespeare to the West End theater district. A visitor's paradise!

$389 complete per person
double occupancy
plus 10% tax and services
via Overseas National Airways
(a certificated supplemental carrier)

LOOK AT EVERYTHING THAT'S INCLUDED IN THIS VACATION OF A LIFETIME! !

- Round trip jet flights with food and beverages served aloft
- Accommodations at a world famous deluxe hotel: The Royal Lancaster, Royal Garden, Grosvenor House or comparable hotel
- Full American breakfasts
- Gourmet dinners nightly at your selection of some of London's finest restaurants
- All gratuities
- Welcome cocktail party
- Specially arranged optional sidetrips
- Free sightseeing tour of London
- All transfers
- All luggage delivered to and from your hotel room and airports (tips included)
- Pre-registering at the hotel
- Tour escort throughout
- Carnival staff in your hotel
- NO REGIMENTATION — you are free to do as you please when and where you please

DEPARTING ON JUNE 25, 1971 FROM BIRMINGHAM, ALABAMA

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
19 SOUTH JACKSON STREET/MONTGOMERY, ALABAMA 36104 (205)263-6441

Please Print

Gentlemen: Enclosed please find $_____ as deposit ☐ as payment in full ☐ for _____ number of persons. Make check or money order payable to: LONDON CARNIVAL _____

$427.90 _____ per person double occupancy. $100 minimum deposit per person. Final payment due 30 days before departure.

NAME _____ PHONE _____

STREET _____

CITY _____ STATE _____ ZIP _____

DEPARTURE DATE _____ DEPARTURE CITY _____

Return this reservation immediately to insure space. Reservations limited. Single accommodations an additional $50 _____. Cancellations accepted up to 45 days before departure; within 45 days, $100 cancellation charge.

☐ Please send me your LONDON CARNIVAL brochure.

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

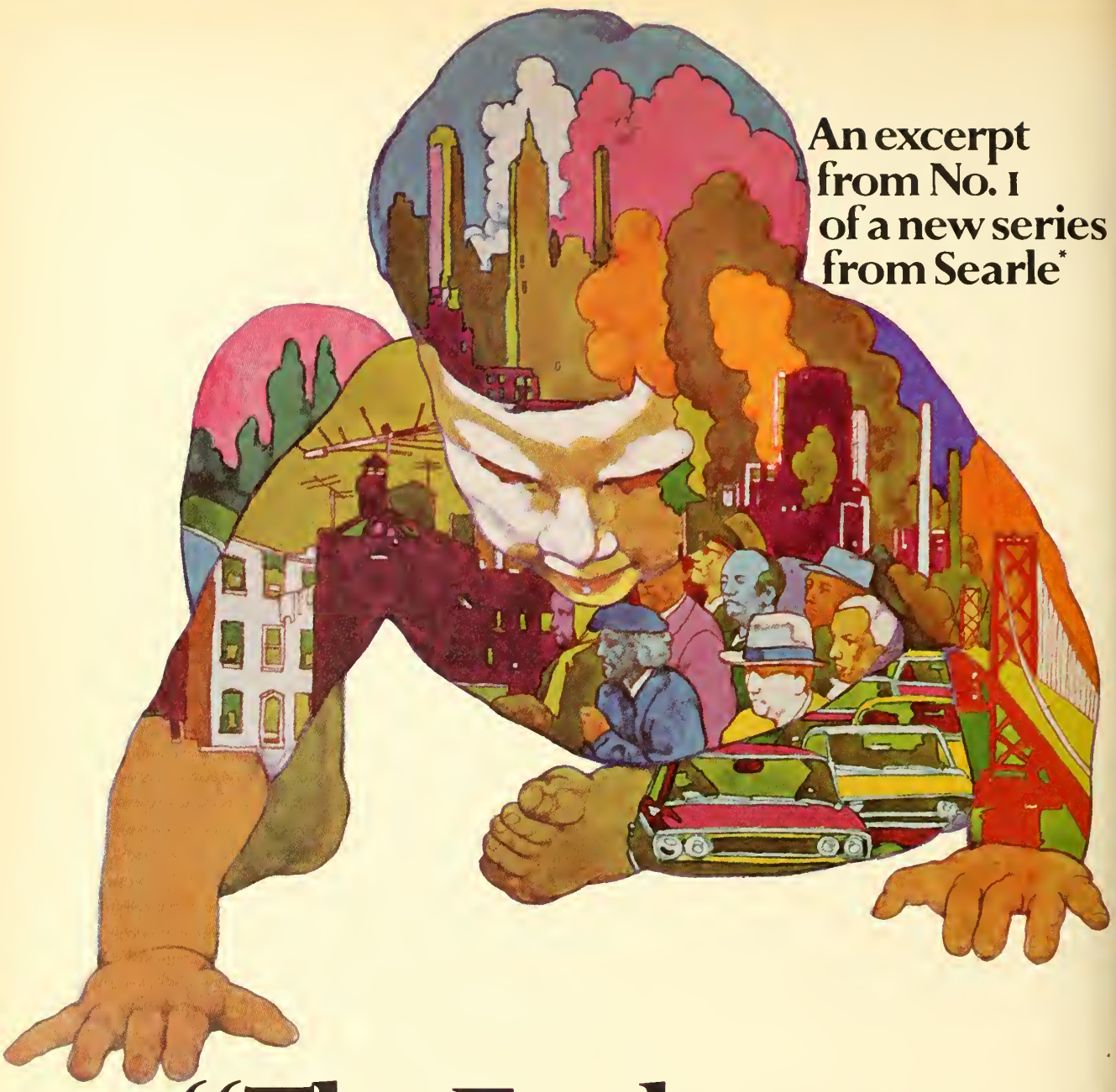
Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*



An excerpt from No. 1 of a new series from Searle*

"The Ecology of Birth Control"

75 million more Americans—what impact on health care?

Because of a declining birthrate in the United States—attributable in no small measure to the widespread use of contraceptives—our population in thirty years is expected to be *only* 280 million, while the world population is expected to double, reaching 7 billion.

But the word "only" has an ironic ring to ecologists who warn of cities resembling overcrowded, contaminated rat colonies, of respiratory and mental diseases reaching epidemic proportions and of a health-care community virtually overwhelmed by the burden.

The global consequences may be no less devastating. Ecologists estimate that every American has roughly fifty times the negative impact on the Earth's life-support systems of, say, a citizen of India. In these terms, adding 75 million Americans would be equivalent to adding 3.7 billion Indians to the world population.

**For the complete brochure, and others in the series as they appear, please write to Searle or ask your Searle representative.* Explored in the forthcoming issues will be the role of birth control on family pressures and its effects on the family; the influences of poverty, ethnic factors and marital status; its role in illness, its genetic implications and its effects on the emotional and behavioral life of the individual.

An original contribution to the science of contraception

Demulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Demulen...for low estrogen and Searle's progestin...with its unsurpassed contraceptive effectiveness and low incidence of side effects...with simple "Sunday-starting" and patient-proof Compack® tablet dispenser.

Actions—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FHS) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain [1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted; anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: **1**. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. **2**. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. **3**. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. **4**. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969.

1A2

SEARLE Where "The Pill" Began

G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

around the state

Vital Statistics

NEW MEMBERS

Houston County

Foss, Arnold Yervant, b 33, mc Emory 65, recip. Georgia 70, Southeast Alabama General Hospital, Dothan, Alabama 36301 R

Hannah, Charles Wayne, b 39, mc Alabama 64, sb 65, 1526 East Main, Dothan, Alabama 36301 ObG

Roberts, Millard Mason, b 30, mc University Miami 66, recip. NBME 69, 1920 Fairview Avenue, Dothan, Alabama 36301 I-GE

Robeson, James Arnold, b 38, mc Washington University 64, recip, Missouri 69, 1920 Fairview Avenue, Dothan, Alabama 36301 I-GE

Lawrence County

Hollobaugh, Samuel Lee, b 37, mc Ohio State 62, recip. Ohio 68, P. O. Box 548, Moulton, Alabama 35650 I

Lee County

Little, Lucretia Ann, b 38, mc Alabama 64, sb 65, 1995 Pepperell Parkway, Opelika, Alabama 36801 P

Little, Rufus Leroy, Jr., b 28, mc Louisiana State 56, recip. Louisiana 57, 1995 Pepperell Parkway, Opelika, Alabama 36801 Path.

Montgomery County

Johnson, Herbert Cecil, b 35, mc Alabama 64, sb 65, 2119 East South Boulevard, Montgomery, Alabama 36111 PL

Young, Frank Coleman, Jr., b 34, mc South Carolina 60, recip. South Carolina 70, 345 South Ripley Street, Montgomery, Alabama 36104 Oph.

MEMBERS DECEASED

Calhoun County

Cleveland, Hunt, Anniston, Alabama, Deceased.

Chambers County

Marshall, W. L., Langdale, Alabama, Deceased 1/14/71.

Jefferson County

Word, Samuel Buford, Birmingham, Alabama, Deceased 1/4/71.

Madison County

Belle, James Major, Jr., Huntsville, Alabama, Deceased 12/70.

Mobile County

O'Neal, Winston James, Mobile, Alabama, Deceased 1/71.

Rowe, Joseph Flournoy, Mobile, Alabama, Deceased 1/7/71.

Pickens County

Lavender, John Robert, Reform, Alabama, Deceased 1/12/71.

CHANGES OF ADDRESS

Calhoun County

Kwong, Lun H., present Jacksonville, Alabama to Box 340, Route 2, Oxford, Alabama 36201

Jefferson County

Mathews, Robert D., present Kileen, Texas to 1701-25th Street North, Apt. 302, Birmingham, Alabama 35234

Patton, Francis M., present Birmingham, Alabama to East Jefferson General Hospital, 4200 Houma Boulevard, Metairie, Louisiana 70002

Madison County

Reskof, David A., present Huntsville, Alabama to 537 East 17th Street, Brooklyn, New York 11226

Marengo County

Gross, Robert M., present Demopolis, Alabama to Washington Street, Demopolis, Alabama 36732

Williams, Gerald N., present Linden, Alabama to Main Street, Linden, Alabama 36748

Montgomery County

Webb, John W., Jr., present Montgomery, Alabama to 1722 Pine Street, Montgomery, Alabama 36106

Pickens County

Wilson, Robert K., present Aliceville, Alabama to 112 Broad Street, Aliceville, Alabama 35442

Tuscaloosa County

Conwill, Gratton B., present Tuscaloosa, Alabama to 1716-1st Avenue, Tuscaloosa, Alabama 35401

Fuin, James C., Jr., present Tuscaloosa, Alabama to 255 University Boulevard, East, Suite 305, Tuscaloosa, Alabama 35401

NEW TELEPHONE NUMBERS

Conwill, Gratton B., Tuscaloosa	758-4279
Foss, Arnold Y., Houston	794-3131
Hannah, Charles W., Houston	792-6171
Hensleigh, John F., Calhoun	237-6717
Hoffman, Michael G., Russell	297-1578
Hollobaugh, Samuel L., Lawrence	355-9129
Johnson, Herbert C., Montgomery	288-0138
Kwong, Lun H., Calhoun	237-8557
Langdon, Harold R., Calhoun	237-6611
Little, Lucretia A., Lee	749-8234
Little, Rufus L., Jr., Lee	749-8234
Montgomery, Hubert T., Jr., Montgomery	288-8580
Monzingo, George F., Escambia	867-7692
Morris, Andrew W., Calhoun	237-5421
Roberts, Millard M., Houston	794-3194
Robeson, James A., Houston	794-3192
Warr, William S., Russell	298-0643
Webb, John W., Montgomery	262-0342
Young, Frank C., Montgomery	265-5295

MEMBER REINSTATED

Calhoun County

Hensleigh, John Frederick, b 23, mc Louisiana 50, recip. Mississippi 55, 700 East 10th Street, Anniston, Alabama 36201 U

MEMBERS TRANSFERRED

Calhoun County

Langdon, Harold Russell, Anniston Army Depot, Anniston, Alabama 36201 from member Jefferson County Medical Society to member of Calhoun County Medical Society GP-S

Morris, Andrew William, Anniston Memorial Hospital, Anniston, Alabama 36201 from member Jefferson County Medical Society to member of Calhoun County Medical Society Path.

Human reason is like a drunken man on horseback; set it up on one side, and it tumbles over on the other.

—Martin Luther

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrachloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfanamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfanamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppositary intravaginally once or twice daily.
Supplied: Cream – Four-ounce tube with or without applicator. Suppositaries – Box of 12 with applicator.

TRADEMARK. AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

Fathers and Sons in Medicine

8 In Blake Family Practice In 2 States

IT ALL STARTED 115 YEARS AGO, with the birth of Wyatt Heflin Blake, Sr., M. D. Dr. Blake died in 1933, but here are eight descendants who continue the family tradition in medicine . . . From left (seated): Drs. Thomas Mathews (Peter) Blake, James Wyatt Caden, Thomas Hill (Tom) Blake Wyatt Heflin Blake, Jr. (known to his intimates as Dick); standing: Townes Kendall Blake, Thomas Hill (Tommy) Blake, Jr., Wyatt Heflin Blake III, John Goodwyne Caden, Jr. The photograph was taken June 15, 1968, at Dr. Kendall Blake's wedding.

Blake is a name to reckon with in any history of Alabama medicine and, in combination with the names of Caden and Heflin, it becomes a formidable roster of physicians over Alabama and Mississippi, not counting the array of farmers, lawyers and political leaders.

Wyatt Heflin Blake, Sr., M. D., was born at Blake's Ferry, Randolph County, on Saturday, June 21, 1856, the son of John and Marietta (Heflin) Blake. As he neared 50 years in practice of his profession, a north Alabama newspaper hailed him not only as a great physician, but "a man of fine ideals and a valuable citizen with a warm place in the hearts of the people." A grandson, also in medicine, writes that "his greatest characteristics were his persistency, thoroughness and enthusiasm," with "a genius for friendship."

In 1900, while physician to the Convict Department, he fathered a bill providing funds to build a prison tubercular sanatorium in Wetumpka, which cut the death rate 60 per cent in its first year of operation. In 1901, when the Department of Archives and History was created, the Governor appointed him trustee from his congressional district. He was an outspoken critic of the imported, distorted history being taught in Alabama schools. But probably his most notable achievement in public life was his fight for a workman's compensation law, inspired by a barge explosion on the old Muscle Shoals Canal (a federal project), when the United States Government assumed no responsibility for the families of the injured and dead. He went to Washing-

(Continued on Page 588)

(Continued from Page 587)

ton and enlisted the aid of his first cousin, then Congressman, later Senator J. Thomas Heflin, uncle incidentally of Alabama's new Supreme Court Chief Justice.

Every honor within the gift of his fellow physicians came to this Dr. Blake during his lifetime, most importantly his elevation in 1911 to the presidency of the Medical Association of the State of Alabama. He died in 1933 at the age of 77.

This senior Dr. Blake once quipped: "I have seven sons—two preachers, two doctors, two lawyers and one honest man, a farmer."

The two doctor sons are currently practicing medicine, one in Alabama, the other in Mississippi, along with six grandsons, with more to come.

The sons are Dr. Wyatt H. Blake, Jr., in general surgery in Sheffield, and Dr. Thomas H. Blake, Sr., in orthopedics in Jackson, Miss. In order of their age, the grandsons are: James Wyatt Caden, M. D., who recently left general practice in Sheffield to practice industrial medicine full time with TVA; Thomas Mathews (Peter) Blake, M. D., professor of Medicine, University of Mississippi; John G. Caden, Jr., M. D., orthopedics, Jackson; Wyatt H. Blake III, M. D., general surgery, Sheffield; Thomas H. Blake, Jr., M. D., currently completing his tour of duty in Viet Nam with the army; and T. Kendall Blake, senior in medicine at Vanderbilt. One of granddaughters of Dr. W. H. Blake, Sr., ried to a Birmingham physician, Clyde M. allen, Jr., M. D., internist.

Other members of the Blake family to be found in the MASA roster are Robert Forney Blake, M. D., of Haleyville, Russell County; Thomas Benjamin Blake, Jr., M. D., of Phenix City, Russell County; and William Avera Blake, M. D., of Mobile.

INTERNIST OR UROLOGIST for active 253 bed GM&S hospital. Excellent teaching program. Salary up to approx. $26,000 depending upon qualifications. Liberal fringe benefits. Moving expenses paid. Tobias Stein, M. D., VA HOSPITAL, Perry Hill Road, Montgomery, Alabama 36109 (205) 272-4670.

Taste!

Dicarbosil®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

The pain of arthritis

relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF

Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.

Available: Bottles of 12, 36 and 60 tablets.

Continuing Graduate Education

ARTHUR M. FREEMAN, JR., M. D.

Representative of MASA

AMA's 2nd Annual Conference on CME for State Medical Representatives

Recently I attended a three-day meeting in Chicago which dealt with the problem of continuing medical education. It was sponsored by the AMA and included representatives from all of the states, averaging two or three per state. It was an intense meeting devoted to an inquiry into (1) the reasons for the need to train physicians past their residency period, (2) the sources of pressure being applied to medicine in general to provide such training, and (3) an inquiry into the responsibility and role of organized medicine and other agencies in accomplishing such training.

The meeting was both interesting and exciting, opening up an entirely new point of view with reference to the public demand for and the magnitude of such training. In the past Medicine has talked piously and extensively about staying abreast and has tried to provide for this in journals, libraries, conventions, meetings of various sorts, and in a gradual proliferation of elective courses lasting from one to five days or more. Too often these modalities of teaching have proved uninspiring and inadequate, and there has been no way to assess the benefit of such meetings to the recipient. More and more it has been felt that conventions provide an opportunity for a doctor to leave town, as a result of which he frequently gets very little out of the lectures. Often, in fact, such programs are not attended.

Frequently the doctor in practice visualizes his need for education as being entirely different from any sort of program that he can find accessible. The courses that are available, the conventions he attends and the lectures within his reach prove dull, dry, irrelevant, too short, too long, or too remote, and for one reason or another he avails himself to only a limited extent.

Journal articles tend to be wordy, dull, and often well behind times. They are not widely

(Continued on Page 593)

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Nothing new about Synirin other than ... it's a stable, uncoated, fast disintegrating tablet of aspirin with pentobarbital potentiating the aspirin analgesia.

Synirin®

ASPIRIN 5 GR.—PENTOBARBITAL 1/8 GR.

ETHICAL ANALGESIA (economical if prescribed in 100 units with privilege of refills)

PRESCRIBING INFORMATION: To relieve tension headaches and arthritic pains, 2 tablets q 4 h. Aspirin and pentobarbital begin their action promptly, continuing for about 4 hours. The small pentobarbital content gives no perceptible sedation. Pentobarbital is destroyed by the body and there is no accumulation. Synirin will supply any aspirin therapy with equal safety. Use aspirin with caution in peptic ulcer.

EACH UNCOATED TABLET CONTAINS:

Aspirin .....325 mg. (5 gr.)
Pentobarbital* .....8 mg. (1/8 gr.)
*May be habit forming.

Federal law prohibits dispensing without prescription
DISPENSED IN BOTTLES OF 100 AND 1000 TABLETS

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

A clinical supply of this new aspirin formulation may be requested.

(Continued from Page 590)

read, even though most doctors take several journals because of the organizations they are more or less forced to join. Journals have fallen far short of the type of education support they should render the practitioner of medicine.

Unimaginative Data Hurtful

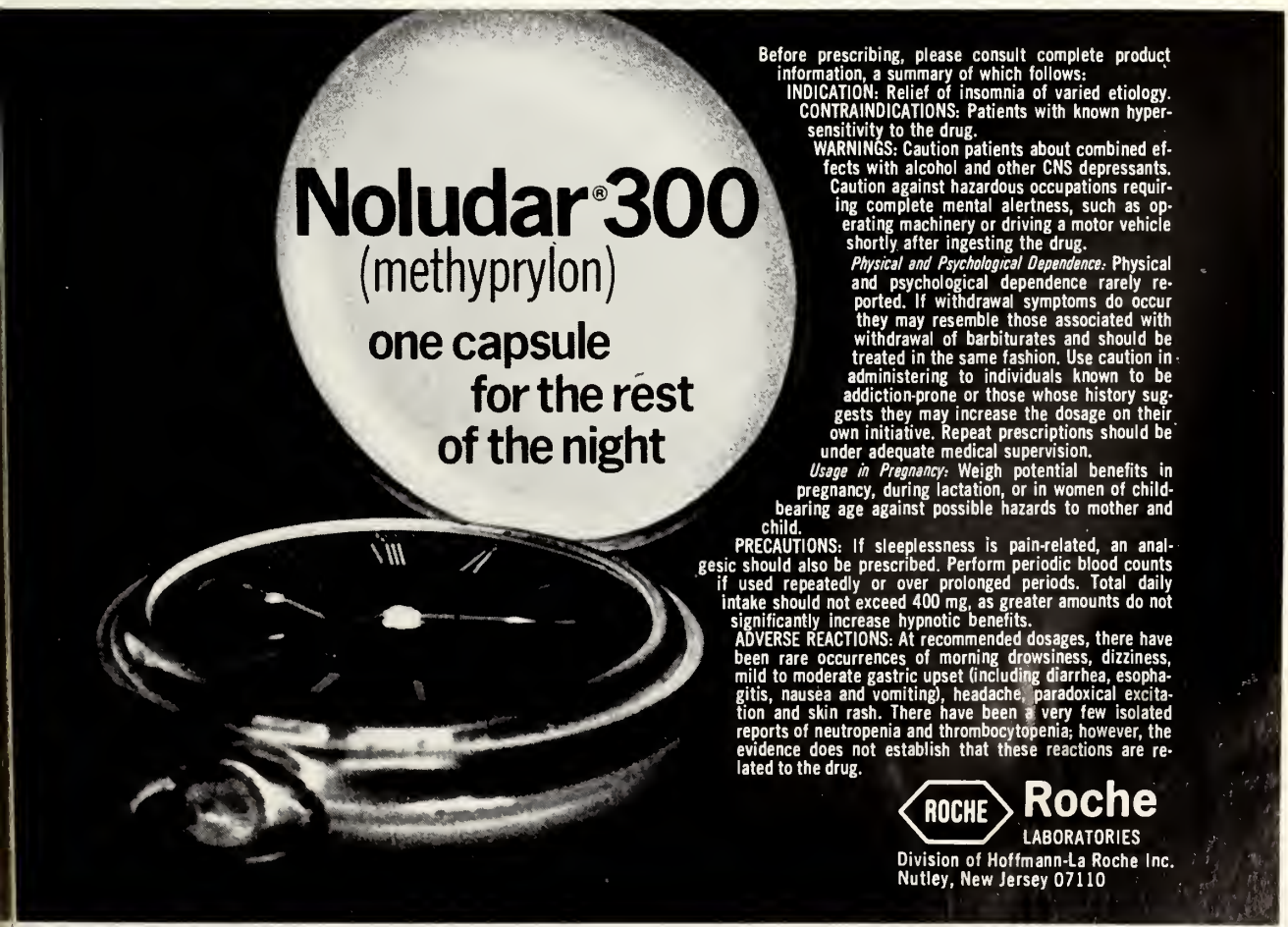
The problem, therefore, is acute in the sense that physicians are not rendering a quality service as the consumer sees it. This has been recognized by public officials, particularly senators and congressmen. Members of the executive branches of the government, both State and National, receive many complaints constantly, not only about the inaccessibility of medical care but the generally poor quality of it, which they feel is in large measure due to doctors not "keeping abreast" of medical progress.

For this reason politicians are placing pressure on the agencies of the government, notably HEW, as a vocal instrument of the increasing and increasingly organized consumer demand that physicians rearrange their programs to make the best possible use of knowledge as it prevails in the best centers. This enjoins the practice of medicine to be homogeneously good throughout the country. Several legal decisions have been rendered in the last few years which obligate the practicing physician in whatever community of the United States to meet the same standards of excellence in practice obtained in the most erudite centers of the larger medical complexes.

This matter concerned the A.M.A. to the extent that this meeting was organized. The problem was studied further from the standpoint of other possible modalities than the ones already alluded to as instruments of education. What indeed are some of these newer instrumentalities? Several were mentioned; I will suggest a few.

One was the A.M.A.'s idea of giving

(Continued on Page 599)



Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select
Silain-Gel® Tablets:

when the patient prefers a liquid, select
Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

One dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

sterile solution (300 mg. per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

and single-dose 2 ml.
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...

©1970 by The Upjohn Company JA70-5835 MED B-4-S (KZL-5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 4900

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

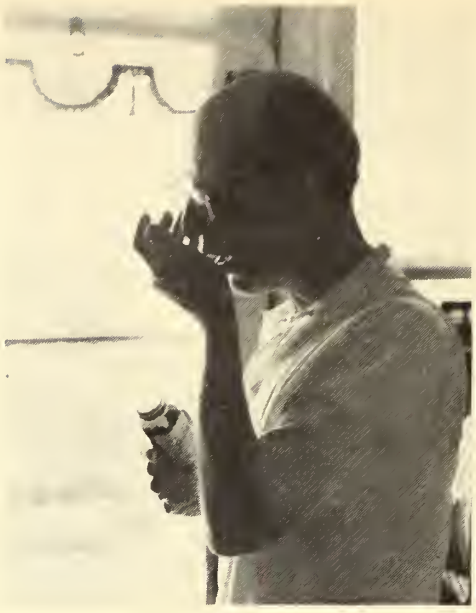
Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.



Multivitamins with pyridoxine can impair levodopa therapy

Your patient with Parkinson's disease and syndrome may be taking a nonprescription multivitamin containing B_6.
Vitamin B_6 reportedly reduces the benefits of levodopa, and may lead to discontinuance of therapy because of apparent ineffectiveness.

Larobec provides needed nutritional support without pyridoxine (vitamin B_6)...and helps ensure that your levodopa therapy is not impaired by self-medication with a pyridoxine-containing multivitamin preparation.

The "incomplete" B-complex

Larobec™
TABLETS

High-potency nutritional support under prescription control

Complete Prescribing Information:
Each Larobec tablet contains:

Thiamine mononitrate (vitamin B_1)	15 mg
Riboflavin (vitamin B_2)	15 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin (vitamin B_{12})	5 mcg
Folic acid	0.5 mg
Ascorbic acid (vitamin C)	500 mg

Description: For prophylactic or therapeutic nutritional supplementation concomitant with levodopa therapy in patients with Parkinson's disease and syndrome, Larobec provides high potency dosages of the major B-complex vitamins, without pyridoxine (vitamin B_6) which has been reported[1,2] to reduce the clinical benefits of levodopa therapy. B-complex vitamins are essential in the anabolism of carbohydrate and protein and in hematopoiesis. Larobec also contains therapeutic quantities of ascorbic acid, a substance involved in intracellular reactions such as tissue repair and collagen formation.
Indications: Larobec is indicated for supportive nutritional supplementation when a water-soluble vitamin formula (without pyridoxine) is required prophylactically or therapeutically in patients under treatment with levodopa.
Warning: Administration of vitamin B_6 may be required if signs of pyridoxine deficiency develop. Larobec is not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.
Dosage and Administration: One or two tablets daily, as indicated by clinical need.
How Supplied: Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.
References:
1. Duvoisin, R. C., *et al.*: *Trans. Amer. Neurol. Assoc., 94*:81, 1969. 2. Cotzias, G. C.: *J.A.M.A., 210*:1255, 1969.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

(Continued from Page 593)

"recognition awards" to physicians who take appropriate courses and who spend a certain amount of time in courses, convention attendance or in voluntary hospital work. It was felt in one "workshop" that this is a rather empty gesture in that, again, there is no "feedback" and no adequate program for determining whether the physician is learning anything from the courses he attends. Indeed it may offer an award to a manifestly inexpert practitioner.

In this connection the possibility of re-certification by re-examination was considered, providing a contrapuntal relationship to the physician's award. Instead of giving the physician a "carrot" for being a good boy and attending a certain number of prescribed or available courses, lectures, seminars, etc., he was "beaten with a stick" in the form of having his license or his hospital appointment contingent upon such attendance. This is the alternate or reciprocal use of the carrot-and-stick approach which is all too familiar throughout history.

What Measuring Stick?

What indeed constitutes a method whereby one can determine whether a physician is being properly educated? The periodic written examinations such as those by the American College of Physicians were discussed. A questionnaire, self-administered at the end of a medical movie, was another method mentioned. Periodic voluntary or compulsory re-examination by specialty boards at intervals of five or ten years may provide an answer. Certifying examinations by state licensing authorities at perhaps ten-year intervals comprise another variation on this theme. A great deal of time was spent on so-called "peer review," an in-hospital technique for checking the quality of chart diagnoses and appropriate laboratory and therapeutic measures. A special consultative group of individuals from the hospital or the adjacent county medical society determines whether standard practices, proper medical studies, and general management meet national standards. Various yardsticks for measuring quality of diagnosis and treatment have been worked out in detail and "peer review" was rated very highly as a form of control or "feedback." As well, it really is education that can be conducted within the hospital.

All of this brought up still another problem involving the dispensation of education to every physician. What agency or agencies can be trusted to be fair and effective?

Several possibilities suggest themselves. Would it be through the national efforts of the American Medical Association? Would it be through instrumentalities of HEW? Would it be through the hospitals themselves? Would it be through an actual educational program supported through the state societies? If so, in what measures and to what extent would the methods of continuing education be financed and how would they be supported? How would they

(Continued on Page 601)

Not just a motel
it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

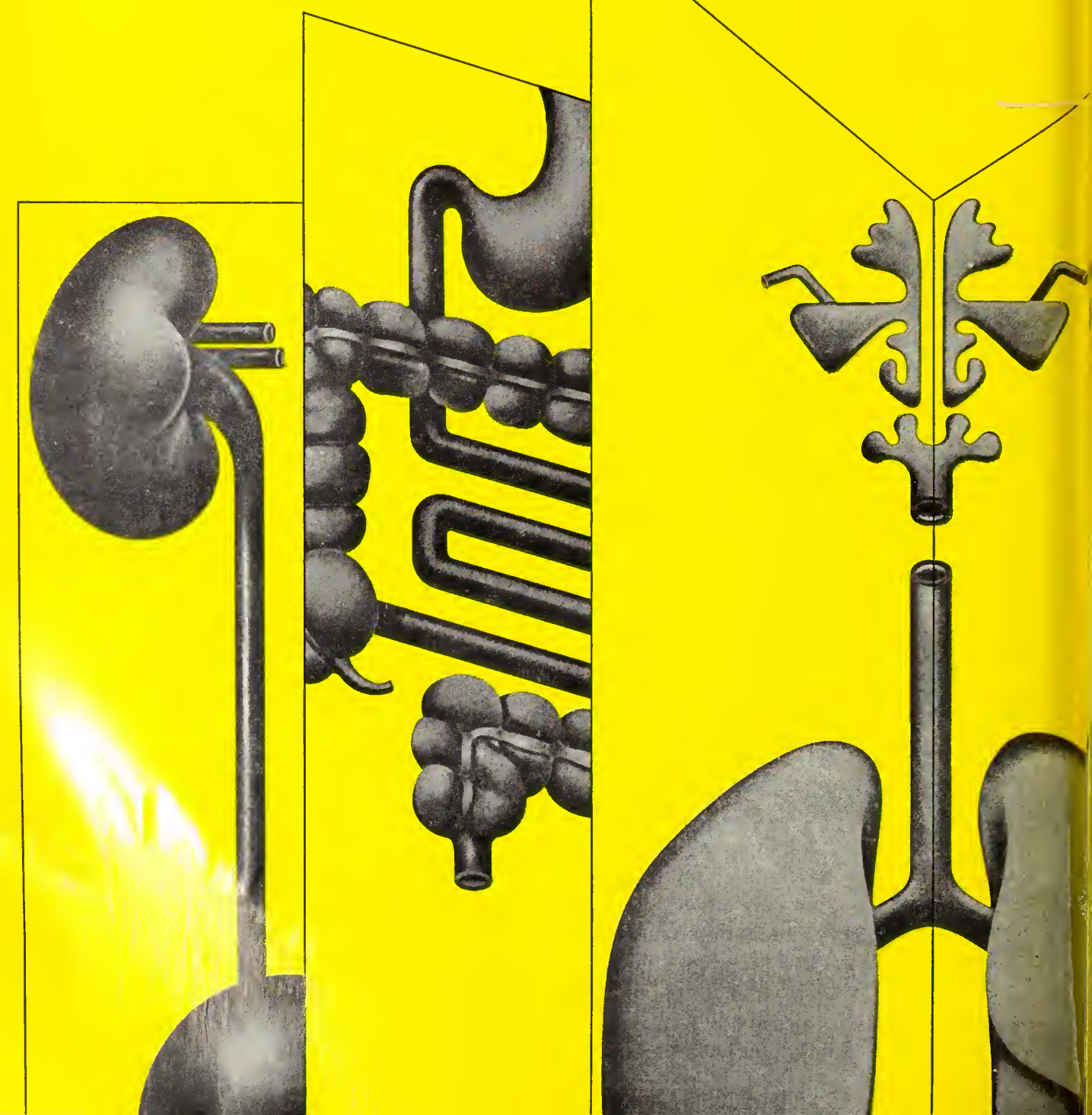
"Where the Action Is!"

Tract Record.

A record of clinical efficacy in treating bacterial infections of the respiratory, genitourinary and gastrointestinal tracts caused by susceptible strains of pneumococci, H.influenzae, staphylococci, streptococci, Klebsiellae, E.coli, Enterobacter, Shigella.

A record of years of dependable broad-spectrum activity.

A record of high urine and serum antibiotic levels all with a 500mg. potency, b.i.d. convenience and low prescription cost.



Tetrex®
bidCAPS®
(500 mg. tetracycline phosphate complex)

For complete information consult Official Package Circular.
(3) 4/2/70

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.

Contraindications: Hypersensitivity to tetracyclines.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Supplied: Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

(Continued from Page 599)

be maintained, and how would discipline be accomplished?

Several workshops dealt with this problem. Dr. Klapper and I attended alternate workshops, as I believe did Dr. Frommeyer, who was also in attendance part of the time. The workshop that I met with dealt with attempts to divide responsibility as it related to specialty groups such as the American College of Physicians, American College of Surgeons, etc., the medical Schools, the A.M.A., the state societies, and the hospitals themselves. There was general agreement, I believe, that the medical schools should be used chiefly as a reservoir of talent for consultative purposes. They should not initiate or control graduate or continuing education, since their major support and responsibility is to undergraduate medical education.

Basic Disciplinary Unit

Next—the A.M.A. in general has a responsibility to guide and to correlate but the State Medical Association itself is probably the basic unit for the discipline that is necessary to accomplish proper programs for physicians and to see that they are properly financed and properly attended. Measures are required to maintain physician interest, to see to it that they are tested on what they have learned and that they meet quality standards of practice. Continuing education and the practice of medicine, as well as the *quality* of practice of medicine, are so closely knit as to be actually head and tail of the same coin. This point was stressed repeatedly by the people who led the discussions I attended; namely, that continuing education is quality medical care.

What is the support that the physician must give to his own continuing education? A reasonable parallel was brought out using industry as a yardstick. Industry feels that a five percent to ten percent slice of the budget of a manufacturing concern is neces-

(Continued Next Page)

sary for quality control. If this be so then some five percent to ten percent of our national medical bill should be appropriately diverted to the programs that are available in graduate medical education. This amounts to quite a bit of money and to an equally large segment of time. From the latter standpoint it means of course that the doctor must spend between two and four weeks a year in his "pursuit of excellence."

Each physician needs an individually constructed kind of education. Many novel types of education or information retrieval were suggested, supplementing the older ones which I alluded to in the first few paragraphs.

What are some of these?

One of the first that appealed to me was one presented by Dr. Lisansky of Baltimore. He suggested a one- to four-week period of in-hospital training within a fairly narrow segment of medicine such as gastroenterology, hematology or rheumatology. For example a single individual found it possible to go to the Department of Medicine at the University of Maryland, become an "honored guest" of the professor and head of this section, make appropriate rounds, work with patients, talk directly on a "one to one" basis with the authorities in the field available in the hospital and attend rounds at neighboring hospitals such as Johns Hopkins. This student-physician was actually in and out of the hospital eight to 12 hours a day for one to four weeks; the average stay being ten days. Dr. Lisansky finds that this program is very popular and successful. Reciprocally, it proves useful to the members of his staff in the school as well as the "guest" who comes in. Each subdivision or department would thus be able to handle approximately 25 or 30 physicians a year, which is a sizeable number.

Dr. Klapper's Proposal

Still another method which was popular and aroused much interest was suggested by Dr. Klapper of our own institution. She described in a very interesting and well received essay the details of the *MIST* program which is familiar to all of us. This program makes available through the telephone exchange at the Medical College of Alabama a qualified consultant in each of many aspects of disease. A wide variety of emergencies and medical questions that occur throughout the state are subject to immediate, extended and repeated telephonic consultation, using a WATS line provided by the University for any physician throughout the state. Often these callers reside in the rural counties and situations that arise in an emergent manner can be discussed with one or more specialists at any time of day or night through the cooperative help of an intelligent and resourceful switchboard operator. It furnishes an excellent source of information in depth from appropriate staff. Dr. Klapper was able to provide statistical confirmation that this method was popular, had steadily increased in usefulness, and possessed a special appeal to the physician facing an urgent problem in a remote area who needed not only technical and informational assistance but perhaps even more, moral and emotional support. By this ready "umbilical" connection with the parent institution, usually the one at which he had trained earlier, continuing education may be enhanced in this glorified curbstone consultation.

Another intriguing method of education popular in Wisconsin was the assignment of a physician, in this particular Wisconsin case at least, a female physician, as an observer to a doctor who requests it. The examining or studying physician observes closely the habits of the doctor in question over a period of time, watching him at his office, in the hospital, in the clinic and particularly on the telephone. She is thus able to assess his responses, the appropriateness and self-confidence that he exhibited in various conditions, noticing both his strong and weak points and the ones in which he felt secure and insecure. At the end of a week or so

(Continued on Page 605)

When Constipation is a Concern . . .

Consider

DOXIDAN® The Logical Laxative

(laxative with stool softener)

Doxidan relieves constipation:

- **gently**—minimal laxative side effects
- **predictably**—overnight results
- **conveniently**—one or two capsules at bedtime
- **economically**—costs less per effective daily dose*

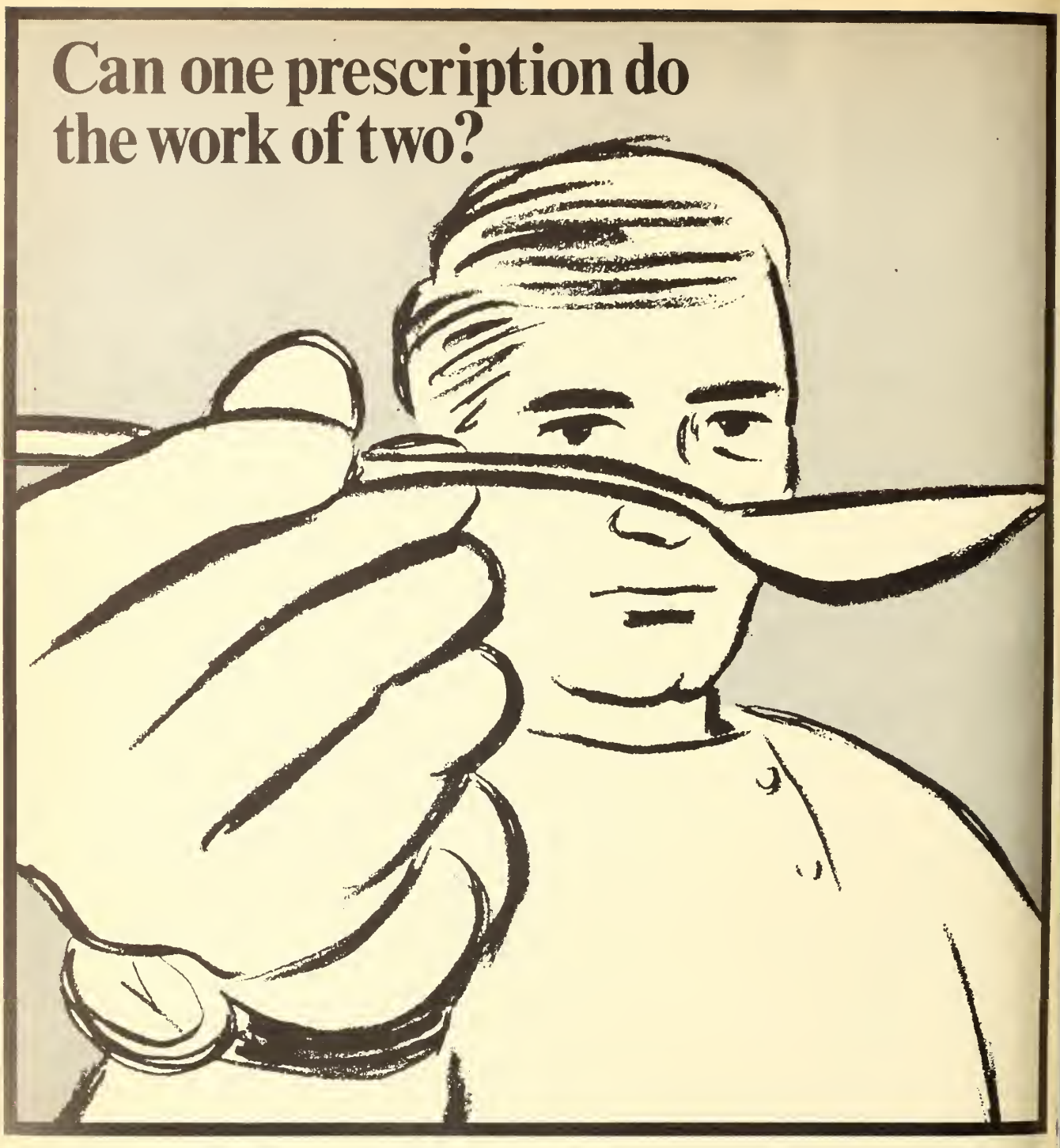
Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate. Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247) and Unit Dose 100's (10 x 10 strips).

*based on actual drug store survey of prescribed dosages

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-168

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain
aluminum hydroxide/magnesium hydroxide, and
Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

0-2572 121721

(Continued from Page 602)

she renders to him a rather comprehensive survey of his strengths and weaknesses and discusses them with him, making appropriate counter-recommendations with reference to his weak points. If, for example, an individual proves insecure in obstetrics he is sent for a month's period to a hospital obstetrical service; if he happens to be unsure in his ready reaction to emergency surgery he is sent to the Emergency Room at the Massachusetts General in Boston for a similar month. Such an individual approach was considered popular and useful in those situations in Wisconsin where it had been used. It seemed to have perhaps numerically limited usefulness but much merit where it had been tried.

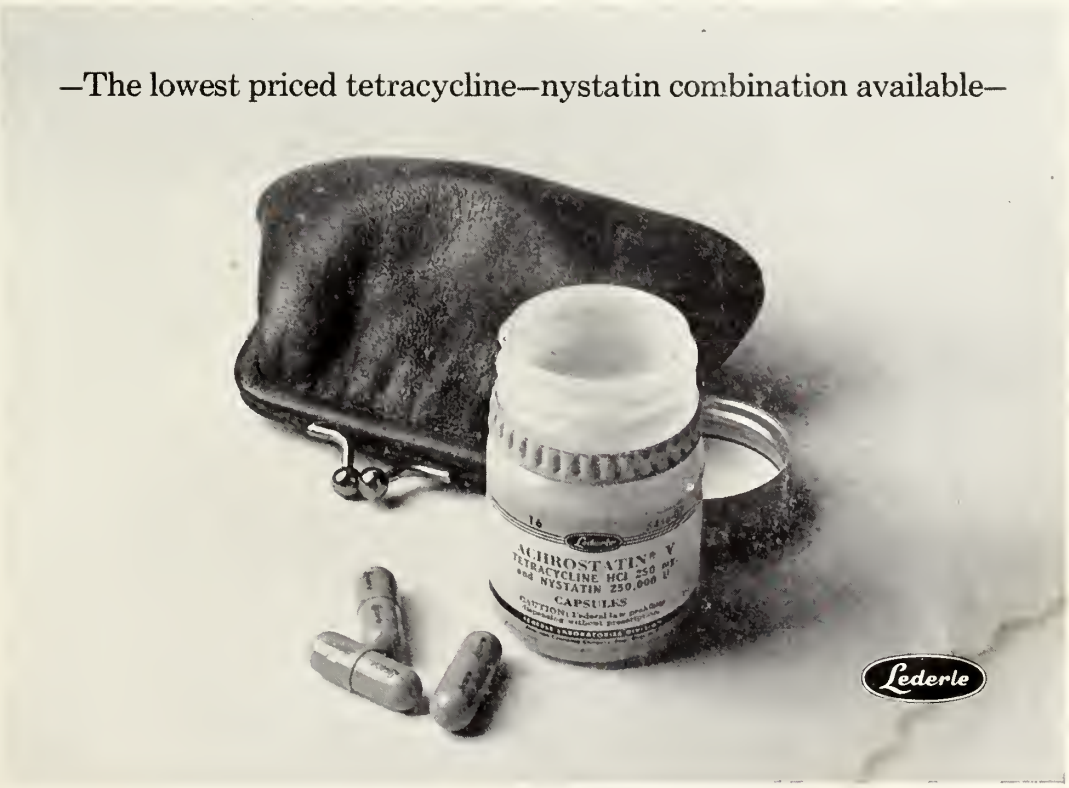
Another plan consists of frequent notification of each physician of all available special courses and special opportunities, keeping him posted on the ones planned throughout the state. This offers a very wide spectrum of educational advantages at each hospital. This is a service of the California Society through its journals.

California Plan

This leads me to a cursory appraisal of the various plans of education that have been adopted by state societies. I was particularly impressed with California, which has 35,000 physicians, many of whom congregate around the great urban areas of San Francisco Bay and Los Angeles County. Their problems are different from ours here, but they certainly have undertaken through their State Society a comprehensive program of education that seems to be popular —two-way radio, television studies, hospital clinics, utilization of television time in the hospitals, one to two week in-hospital services at the medical centers, and a host of other methods. These are made known through a central clearing house run by the state society from Sacramento. Whether their programs would apply in any detail in our state is doubtful, but certainly it lends

(Continued on Page 606)

—The lowest priced tetracycline—nystatin combination available—



(Continued from Page 605)

confidence to the idea that the state can do something about medical education here as it does in California.

In Pennsylvania, the state society has set up a program chiefly utilizing the hospitals. It appears to be comprehensive and to encompass, very significantly, a testing period afterwards. It seems to suffer both from failure of the physicians to cooperate at all times, and furthermore there may be less than optimal physician acceptance and financial support. This is just a cursory opinion that I formed which may not be entirely correct. The director of this program is an extremely outstanding and able educator. The same situation seemed to obtain with the Massachusetts educational setup, likewise organized by the Massachusetts Medical Society. It too centers in the hospitals. Although useful, it falls short of perfect acceptance and support.

A similar program seems to be in the making for Maryland. This will be under the direction of the same very successful director who conducted the Pennsylvania operation.

We find that the Southern state with the most emphasis on this program is a neighbor, Tennessee. Their emphasis is on meetings and lectures, although very comprehensive in scope. It formerly was headed by a very distinguished educator and former president of the American College of Physicians, Dr. Rudolph Kampmeier. It seemed to me that there was far too much emphasis on lectures, meetings, three-day courses, and perhaps not enough on actual in-the-hospital exposure to patients directly and on a "one to one" confrontation by a doctor and his consultant. But at least Tennessee does have a program, and to a lesser extent so does Virginia. These would certainly bear watching since they are in a process of active evolution. They are conducted at the grass roots level by physicians in private practice, often in general practice, working in fairly close

(Continued on Page 608)

Brief Summary of Prescribing Information–9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

(Continued from Page 606)

harmony with Vanderbilt and, I believe, to a lesser extent with the other medical schools in the state.

Promise of Oregon Plan

The most interesting experiment with reference to possible adaptation by Alabama seemed to me to be the Oregon development. I find that the Oregon program necessitates a close cooperation between the American College of Physicians, the American College of Surgeons, and other similar specialty groups working through the state society with the help of their one medical school. They have a program that is comprehensive and in which physicians are compelled to comply and attend. It includes a number of educational opportunities for control to determine whether improvement has been wrought in the form of "peer review," awards for attendance, and examinations. The setup has the support of the members of the state. Their one large city, one medical school, and number of physicians involved bear a resemblance to Alabama. Society membership requires physician participation.

Somewhat similar is Wisconsin, which is more Alabama's size. Its program is like the one in Oregon but a little less well organized and perhaps a little less selective than the Oregon system. Somewhere between the Oregon and Wisconsin experiments may lie the best approach for Alabama, subject to our own modification.

My own feeling from this two-day study is that the whole program is exciting and should dominate the thinking of organized medicine in Alabama for the next decade. It is the chief business of our society. Our physicians do need improved training; it is mandatory, but the situation must be sold to the doctors, not forced upon them. The doctors must agree to spend individually several hundred dollars a year in self-education. This will have to be spent privately, through the hospitals, and through the state societies. There must be some way of determining whether doctors are getting anything out of continuing education. They will be tested in some manner. Peer review, carefully conducted, may be the best way of testing, as well as teaching. Other methods, such as the examination method for licensure or relicensure, are obnoxious and will have to be soft pedaled. Hospital accreditation, accreditation for acceptance of third-party payments through hospital accreditation will give added monetary stimulus to keeping abreast of medicine and attending the programs. Someone in state society education must assist each individual on a personal basis to get the right kind of training that he himself needs.

In addition the physician must find help in absenting himself from his practice, either from a locum tenens, perhaps provided by the state medical school in the form of temporary services of a resident, perhaps in other ways—all of this will prove very useful in extending the much needed knowledge that each physician must have to practice modern medicine and its exponentially increasing demands upon all of us. The physician who grosses $50,000 to $100,000 per year must now plan to spend $5,000 to $10,000 in educating himself. A corresponding amount of time must be spent. Some of this must be individually conceived, others must be worked through organizational methods.

Hospitals For Education

My own feeling is that the hospitals must be used as the means of educating a physician. Within the hospital there are the patients and the instrumentalities of education as well as the personnel to achieve this education. The medical schools must be used as a reservoir of talent, but they must not dictate nor determine the method we use. They must not conduct examinations. They should be helpful in the continuing educational process. This, I believe, is the role they themselves wish to assume. Above all,

HEW itself should not get in on the act except as a stimulus.

The American Medical Association should serve as a coordinating body, but in my opinion the state society itself should constitute the essence of the program. Utilizing the excellent experience now available from such states as California for its general excellence, Oregon for its specific applicability to the Alabama situation, and to a lesser extent the Wisconsin program should be given serious consideration. To a lesser extent Massachusetts, Pennsylvania, and because of the regional feature involved, both Virginia and Tennessee demand attention.

I suggest that the Medical Association of the State of Alabama set up an Office of Medical Education with a competent director, a man who has been in practice, who has the confidence of the medical school as well as the physicians, and who can help organize and direct under the auspices of MASA. He must work with and through the hospitals in close cooperation with Federal agencies. HEW will probably have some funds available to assist in this. The actual machinery for obtaining money is hard to envision or to come by at this time. Sooner or later it will have to come out of the pockets of the physicians and then in turn out of the pockets of the patients and out of the so-called third parties who now bear a high fraction of the cost of medical care. If medical care *is* education, or, stated in another way, if medical education conducted along the lines we mentioned *is* improved medical care, then we will actually save money for the patients and their third party carriers. It must not be used as a means of tyranny exerted on the practicing physician by a governmental bureaucracy nor by a remote institution.

I am hopeful that we will place this authority within the state society; this is where it belongs. It does not belong at the county level, it does not belong at the national level —it must reside at the state level. The medical school must be enlisted as a hearty ally. The educational program must be administered through cooperative but strictly subservient h o s p i t a l associations and county medical societies. This is the gist of what I learned and about which I formed an opinion in Chicago. I hope that we can proceed accordingly with rapidity and confidence.

I would like to make a much more detailed personal study of Oregon and Wisconsin and pass on to you in greater detail what I think are really practical, worthwhile methods of upgrading the quality of the physician's life in Alabama and consequently the care that his patients receive in our state. I think that this is something that could be done in a matter of months and need not require years to do.

May you live all the days of your life.

—Jonathan Swift

Dining Four Times A Day

Four meals a day, as a compromise between the customary three and the innovative five, are now being served by Chicago Wesley Memorial Hospital and initial reaction is applauded in an article in the November issue of "Nursing Homes."

Under the plan, a continental breakfast, consisting of a selection of juices, hot and cold cereals, breakfast breads, and hot and cold beverages, is served at 7 a. m.; brunch, served at 10:30 a. m. includes eggs, bacon, or sausages with waffles or pancakes, or a luncheon including entree, vegetables, salad, and dessert; dinner at 4 p. m. includes the usual menu items and is followed by a bedtime snack at 8 p. m. of sandwiches, graham crackers, simple desserts, and cold beverages.

When irritable colon feels like this

The blowfish, a small specie of fish, reacts to stress or fright by puffing itself up wi air. After about a dozen noisy gulps the belly is balloon shaped and hard. When replaced in the water the air quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

Alabama Department of Public Health

A Review Of The Program For The Detection Of Genetic Diseases In The Public Health Laboratory

by Ruby Atkins and Gary Tomlin
Microbiologists, Bureau of Laboratories
Alabama Department of Public Health

As the Bureau of Laboratories enters the seventh year of its program of testing for inherited metabolic disorders, it seems timely that a review be made of the highlights of this challenging activity.

The year 1964 marked the beginning of serious consideration by the laboratory and the Bureau of Maternal and Child Health of the possibility of launching the entirely new program designed to diagnose phenylketonuria (PKU) in infants and to initiate dietary treatment before brain damage occurred. In preparation for the responsibility, two microbiologists spent a week in the Massachusetts Diagnostic Laboratories, where a successful program was observed in action. In addition to consultation with authorities in the laboratory field, a visit was made to the Joseph Kennedy Center, where treatment of the children was observed, and discussions with representative members of the team involved in diagnosis and treatment were made possible.

Since the initiation of the program in Alabama in November of 1964, 13 cases of PKU have been diagnosed in newborn babies. Dietary treatment was instituted early enough to prevent crippling brain damage. In addition, six older children ranging in age from seven months to 14 years have been detected. Five of these children were born before the Alabama program began. The sixth was seven months old before it was tested, and brain damage had already occurred. All of these children are mentally retarded.

Eighteen cases of PKU were found in a survey of Partlow State School made in 1964. As a result of the screening of new admissions, three additional cases were found bringing the total to 21, or an institutional incidence of approximately one per cent, which is within the national range among mental retardates.

To date approximately 200,000 infants have been screened, and with the finding of 13 newborn cases (the seven-month-old child has been excluded from these figures), the incidence in Alabama at this time is approximately 1:15,000. The overall national incidence remains 1:10,000. By late 1970 four cases had been diagnosed, while there were two in 1969, one in 1968, none in 1967, two in 1966, three in 1965, and one in 1964.

It is of interest that Alabama has diagnosed PKU in one Negro infant. This baby has been on the Lofenalac diet furnished to all PKU infants by the Bureau of Maternal and Child Health since she was one month old.

At this time only seven other cases in Negroes have been detected in the United States. It is also interesting that the parents of two of these infants were former residents of Alabama.

In 1968 tests for three additional metabolic disorders were instituted. These procedures were for Maple Syrup Urine Disease (MSUD), tyrosinemia, and homocystinuria and utilized the filter paper blood sent to the laboratory for PKU testing. One case of homocystinuria was detected, but the family refused counseling and treatment, and the infant died. Since this phase of the program was on an experimental basis and its continuation depended upon the case finding, it was discontinued after 127,000 tests were completed with no other case diagnosed.

At this time it was decided a more fruitful and effective effort could be directed toward testing blood and urine by paper chromatography. This procedure had been found useful in confirming cases of PKU. Furthermore, as a screening tool it had proved its value because errors of metabolism involving any of the amino acids can be detected. As a result of the chromatographic screening of residents of Partlow State School (using blood and urine) an interesting case of hereditary tyrosinosis was found, which is described in a paper to be submitted to the "Journal of Pediatrics" for publication. In addition, an unusual error of sulphur metabolism, previously unknown, was detected and will be described in a paper offered for publication at a later time.

In January of 1970 chromatographic studies utilizing both blood and urine were made available to physicians in selected areas. This pilot study will determine the usefulness of the procedure on a statewide basis. One case of Maple Syrup Urine Disease has been confirmed, and the baby is being treated. Because MSUD is a condition which is usually fatal soon after birth if untreated, every effort was made to expedite diagnosis and to obtain the completely synthetic diet. This disorder involves the metabolism of three amino acids: leucine, valine and isoleucine. The treatment of MSUD is one of the most difficult to manage because leucine is so widely distributed in foods.

The responsibility of the laboratory does not end with the finding of babies with these disorders. The amount of amino acids which can be included in the diet depends on the resulting levels. Specimens are sent to the laboratory periodically for this determination. Of the 13 newborn cases detected, one died in an accident, another moved out of the state, and one is being managed privately. The remaining ten are currently being maintained on the Lofenalac diet supplied by the Bureau of Maternal and Child Health. The progress of their diet is checked by the laboratory. Also being monitored are the diets of four children who were diagnosed in other states and moved into Alabama. With the finding of the case of MSUD, the Guthrie test for leucine must also be used to measure the level of this amino acid in order that the diet can be regulated within a safe range.

Several cases involving infants born with brain damage who did not have PKU themselves, but whose mothers had an abnormally high level of phenylalanine, have been reported. As a result, early in the program notices were sent to physicians and health departments offering to determine the blood level of pregnant women. Because blood is drawn for other testing procedures, it was thought this evaluation could be made with little additional effort on the part of the physician. Approximately 37,000 maternal specimens had been tested by late 1970.

Six technical workers and one clerk-typist are employed fulltime in the screening and chemistry sections involved in this program. Because an untreated newborn infant with PKU suffers progressive brain damage with each passing day, extra measures are taken to prevent delay in making the necessary tests for confirming the condition. Tests are

(Continued on Page 617)

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

diethylpropion hydrochloride, N.F.)

Works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

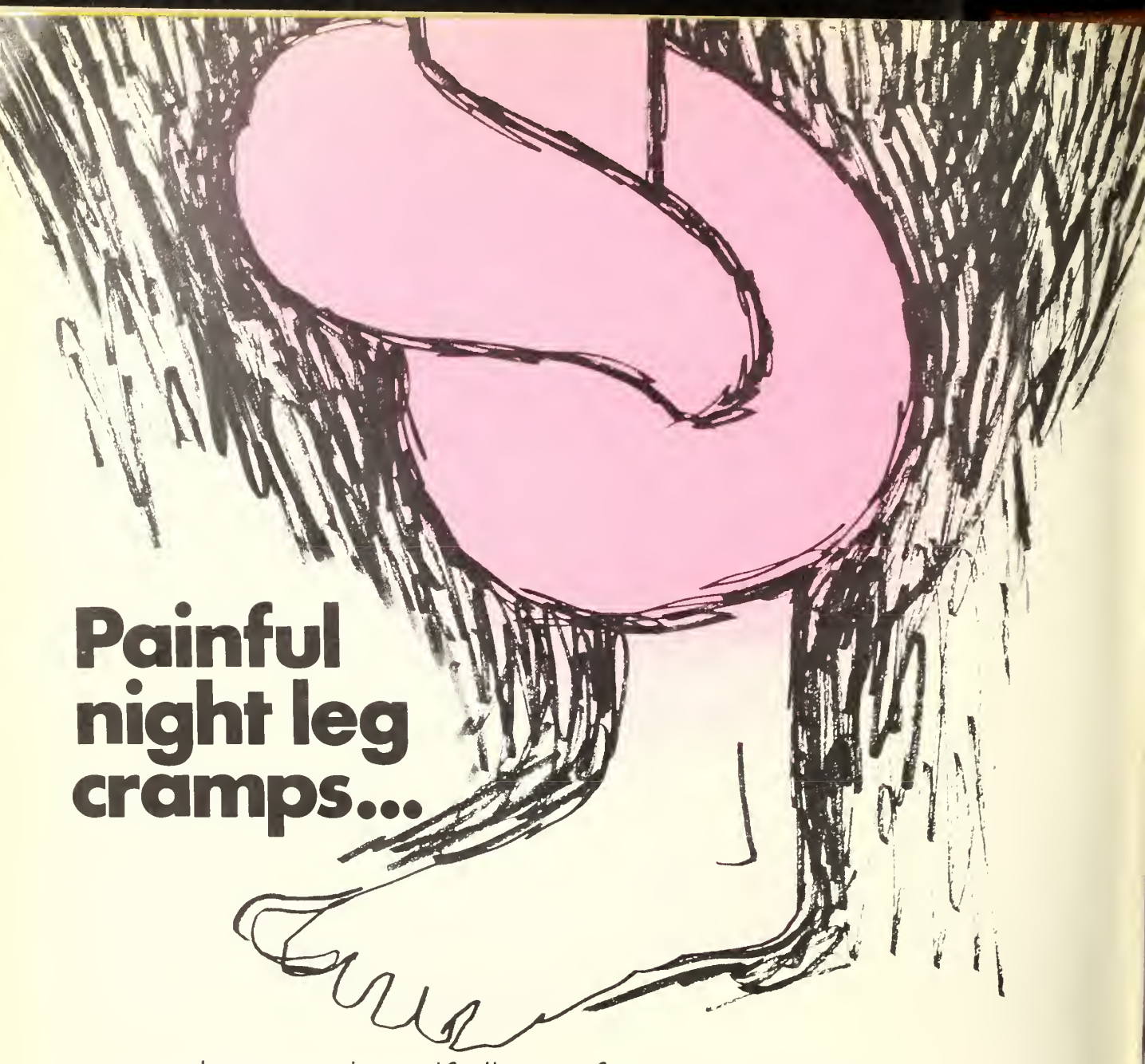
Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS *effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathamimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenamena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastraintestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulacytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and palyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-103 / 2/71 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144



Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

Q103 2/71

(Continued from Page 614)

set up and read six days a week, Monday through Saturday, and on holidays. Each test is read by one person and checked by another, and if indicated, immediate action is taken by telephone.

Many pregnant women in the state are admitted to the hospital for delivery and go home after one or two days. Because the phenylalanine level depends on protein assimilation and these infants have been fed very little, if any, milk when the specimen is collected as they leave the hospital, a serious problem is created for the laboratory. A great deal of time is spent by technical and clerical personnel in handling these unsatisfactory specimens and in sending notices requesting additional filter paper blood after adequate feeding has been accomplished. Records must show the status of any infant, and it must be followed until a valid test is reported or it is determined the specimen will not be received. As a result, records are voluminous and complicated.

It has been observed that PKU does not usually limit the life span. The cost of a lifetime of institutional care varies with the locale, but in general a conservative estimate is considered to be $125,000. The financial saving to the state can thus be figured as approximately $1,500,000. The most rewarding aspect to the individuals intimately involved with the program, however, is to periodically see one of these children and to know he has been saved from a lifetime of custodial existence.

one capsule for the rest of the night

NOLUDAR® 300

methyprylon)

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

INDEX TO ADVERTISERS

Arch Laboratories 588

Blue Cross-Blue Shield ..... 3rd Cover
The Bradley Center 612
Breon Laboratories 589
Bristol Laboratories 600, 601, 606, 607
Burroughs Wellcome 597

Campbell Soup 579
Classified 588

Geigy Pharmaceuticals 555
Guest House Motel 599

Highland Hospital 618
Hoechst Pharmaceuticals 603

Lederle Laboratories 605
Eli Lilly & Company ..... 1st Cover, 566

Wm. S. Merrell 604
Medicenters of America 559

National Drug 585, 586, 615, 616

Wm. P. Poythress 591, 592

A. H. Robins 594, 595
Roche Laboratories ..... 2nd Cover, 553, 560, 561, 593, 598, 617, 4th Cover

G. D. Searle 580, 581
Stuart Pharmaceuticals 582, 610, 611

Edward Taylor 557

Upjohn Company 596

Warner-Chilcott 562, 563

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

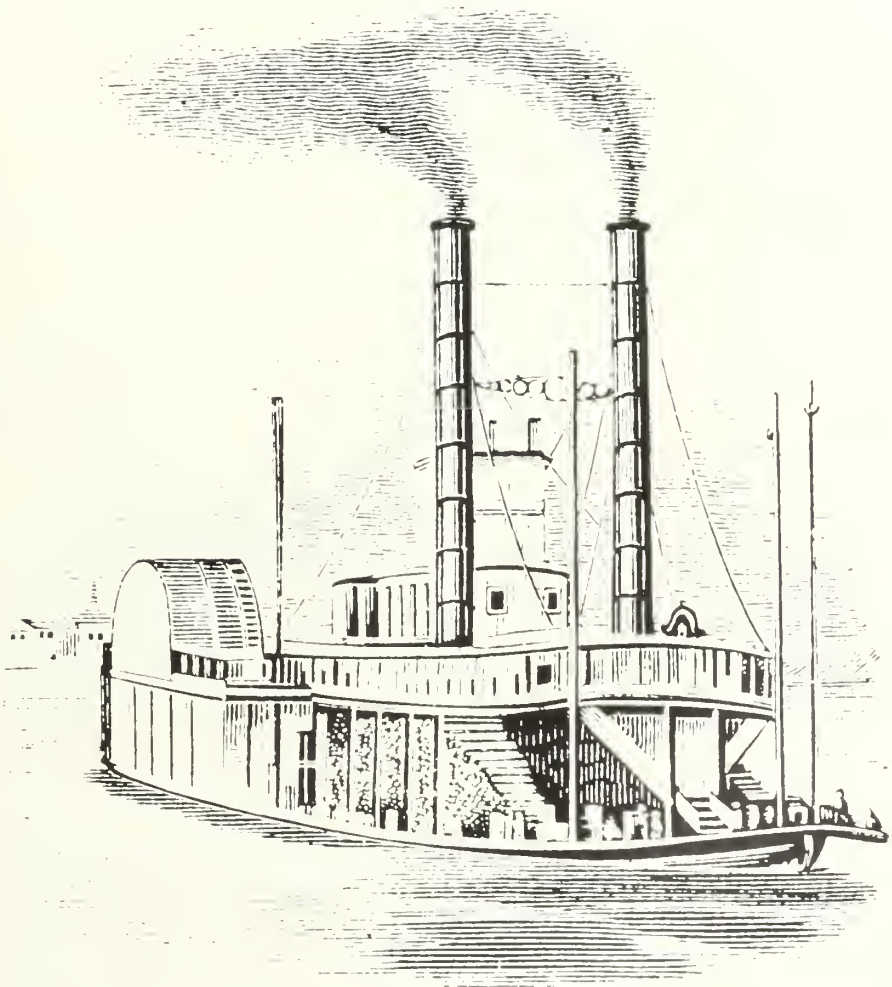
SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Associate Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Alabama's first meeting of a Medical Society was held at Mobile in 1847. Physicians from the northern section of the State probably traveled by horseback or stagecoach to Tuscaloosa, then by riverboat to Mobile.

BLUE CROSS-BLUE SHIELD OF ALABAMA



The hypochondriac fugitive from anxiety

For many patients with hypochondriacal tendencies, physical complaints represent a device by which they can avoid facing emotionally charged personal problems. When anxiety is pronounced, the calming action of Librium (chlordiazepoxide HCl), by relieving anxiety, may foster communication, favor productive counseling and accelerate relief of anxiety-linked symptoms.

Librium is used alone or concomitantly with certain primary drugs for some medical conditions associated with undue anxiety. It has demonstrated a dependable antianxiety action in many clinical areas. For oral administration, Librium is supplied in three dosage strengths to control mild, moderate and severe anxiety.

whenever moderate to severe anxiety is a contributory factor

Librium® 10 mg
(chlordiazepoxide HCl)
1 or 2 capsules
t.i.d./q.i.d.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tensian and apprehension are significant campanents af the clinical profile.

Contraindications: Patients with knawn hypersensitivity ta the drug.

Warnings: Caution patients about passible combined effects with alcahal and other CNS depressants. As with all CNS-acting drugs, cautian patients against hazardous occupatians requiring complete mental alertness (e.g., aperating machinery, driving). Though physical and psychological dependence have rarely occurred reparted an recommended doses, caution in administering ta addiction-prone individuals ar thase wha might increase dasage; withdrawal symptoms (including convulsians), fallawing discontinuatian of the drug and similar ta those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactatian, or in wamen af childbearing age requires that its potential benefits be weighed against its passible hazards.

Precautions: In the elderly and debilitated, and in children aver six, limit ta smallest effective dasage (initially 10 mg or less per day) to preclude ataxia ar aversedatian, increasing gradually as needed and talerated. Nat recammended in children under six. Thaugh generally not recammended, if cambinatian therapy with ather psychotropics seems indicated, carefully consider individual pharmacalagic effects, particularly in use af patentiating drugs such as MAO inhibitars and phenothiazines. Observe usual precautians in presence af impaired renal ar hepatic functian. Paradoxical reactians (e.g., excitement, stimulatian and acute rage) have been reparted in psychiatric patients and hyperactive aggressive children. Emplay usual precautians in treatment af anxiety states with evidence af impending depressian; suicidal tendencies may be present and pratective measures necessary. Variable effects an blood coagulatian have been reparted very rarely in patients receiving the drug and aral anticoagulants; causal relatianship has nat been established clinically.

Adverse Reactions: Drawsiness, ataxia and canfusian may accur, especially in the elderly and debilitated. These are reversible in mast instances by proper dosage adjustment, but are alsa accasianally abserved at the lower dosage ranges. In a few instances syncape has been reported. Alsa encauntered are isolated instances of skin eruptions, edema, minar menstrual irregularities, nausea and canstipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally contralled with dasage reduction; changes in EEG patterns (low-valtage fast activity) may appear during and after treatment; blaad dyscrasias (including agranulocytasis), jaundice and hepatic dysfunction have been reparted accasionally, making periodic blood caunts and liver function tests advisable during pratracted therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc
Nutley, N.J. 07110

CONVENTION PROGRAM ISSUE

JOURNAL of the Medical Association of the State of ALABAMA

DISPLAY SHELF

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
23 APR 1971

IN THIS ISSUE

An Evaluation of Liver Function Tests in Differential Diagnosis of Jaundice 641

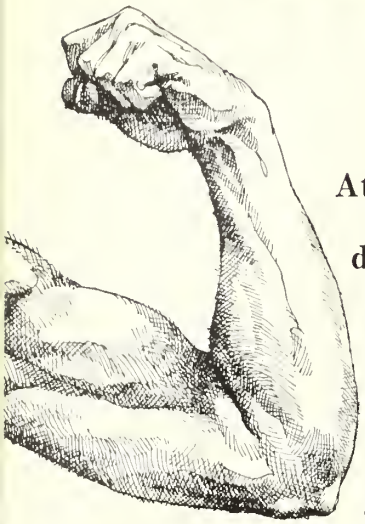
Common Misconceptions in Inhalation Therapy, Part IV, Respirators and Their Applications 644

Program of the 110th Annual Session 655

Francis A. Countway Lib. of Medicine
10 Shattuck St.
Boston, Massachusetts 02115

APRIL 1971

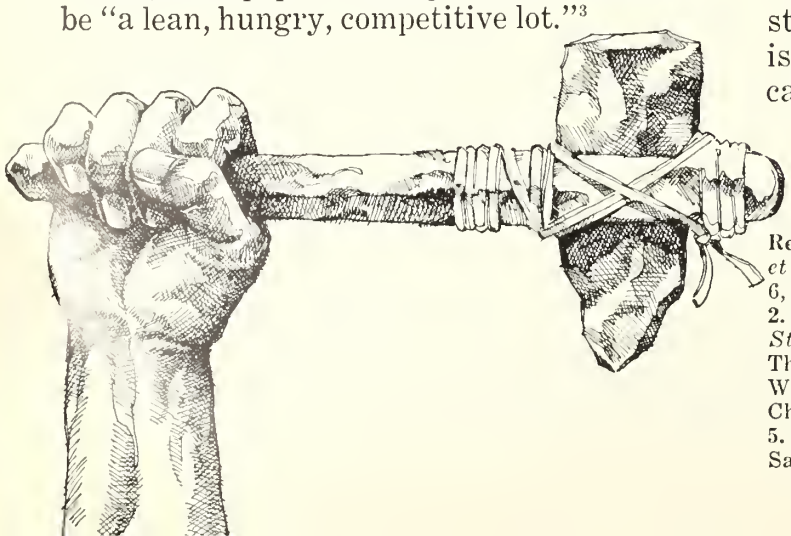
IF MORE MEN CRIED



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



Big boys don't cry. If more men cried maybe fewer would wind up with duodena ulcers. But men will be men—the sum total o their genes and what the are taught. Schottstaed observes that when a mother admonishes he son who has hurt himsel that big boys don't cry, sh is teaching hin stoicism.[4] Crying is th negation of everythin society thinks of as manly A boy starts defending hi manhood at an early age

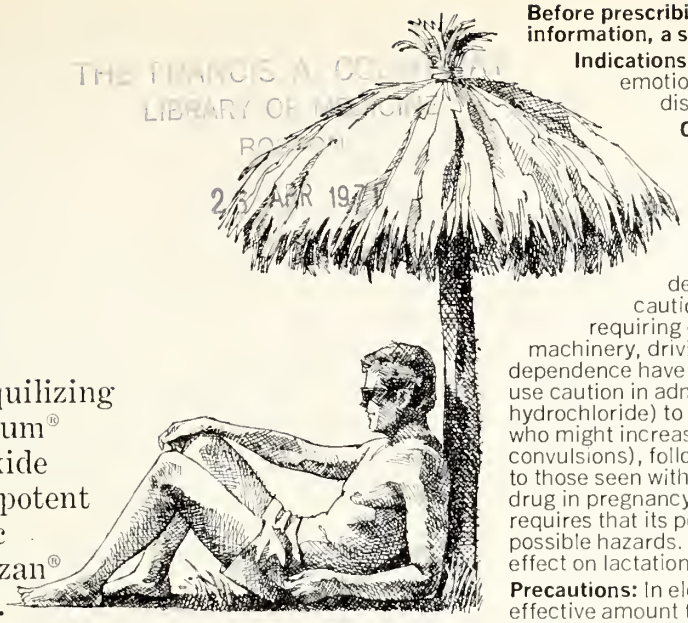
Take away stress you can take away symptoms

There is no question that stress plays a role in the etiology of duodenal ulcer Alvarez[5] observes that many a man with ar ulcer loses his symptoms the day he shuts up the office and starts out on a vacation. The problem is, the type of man likely to have ar ulcer is the type least likely to take long vacations or take it easy at work.

The rest cure vs. the two-way action of Librax.® For most patients, the rest cure is as unrealistic as it is desirable. Still, the stress factor must be dealt with. And here is where the dual action of adjunctive Librax can help. Librax is the only drug that com-

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. M. *et al.* (eds.): *Harrison's Principles of Internal Medicine*, ed 6, New York, McGraw-Hill Book Company, 1970, p. 1444 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolff's Stress and Disease*, ed. 2, Springfield, Ill., Charles C Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottstaedt W. W.: *Psychophysiologic Approach in Medical Practice* Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 163 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. B Saunders Company, 1951, p. 384.

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
25 APR 1971

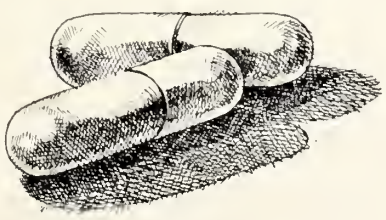


nes the tranquilizing
:tion of Librium®
:hlordiazepoxide
Cl) with the potent
ıticholinergic
:tion of Quarzan®
:lidinium Br).

Protects man from his own hungry per-
ınality. The action of Librium reduces
ıxiety—helps protect the vulnerable patient
om the psychological overreaction to stress
at clutches his stomach. At the same time,
e action of Quarzan helps quiet the hyper-
:tive gut, decreasing hypermotility and
/persecretion.

An inner healing environment with 1
2 capsules, 3 or 4 times daily. Of course,
ere's more to the treatment of duodenal
cer than a prescription for Librax. The pa-
ent—with your guidance—will have to ad-
st to a different pattern of living if treat-
ent is to succeed. During this adjustment
riod, 1 or 2 capsules of Librax 3 or 4 times
ily can help establish a desirable environ-
ent for healing.

Librax: It can't change man's nature.
t it can usually make it easier for men to
pe with the discomfort of stress—both
ychic and gastric—that can precipitate
d exacerbate duodenal ulcer.
Librax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

in the treatment of duodenal ulcer

adjunctive

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • April, 1971 • No. 10

Office of Publication
19 So. Jackson St. .... Montgomery, Ala. 36104
Subscription Price ..... $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. ..... Montgomery

Managing Editor
L. P. Patterson ..... Montgomery

Assistant Managing Editor
Mary Nell Williford ..... Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman .. Montgomery
C. Kermit Pitt, M. D. ..... Decatur
H. H. Hutchinson, M. D. ..... Montgomery
William L. Smith, M. D. ..... Montgomery
L. P. Patterson ..... Montgomery

Officers of the Association

President
O. Emfinger, M. D. ..... Union Springs

President-Elect
A. E. Thomas, M. D. ..... Montgomery

Vice-Presidents
F. M. Phillippi, Jr., M. D. ..... Brewton
J. E. Cameron, M. D. ..... Alexander City
Wood S. Herren, M. D. ..... Birmingham

Secretary-Treasurer
William L. Smith, M. D. ..... Montgomery

Executive Director
L. P. Patterson ..... Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. ..... Decatur
J. P. Collier, M. D. ..... Tuscaloosa
Paul W. Burleson, M. D. ..... Birmingham
L. L. Hill, M. D. ..... Montgomery
M. Vaun Adams, M. D. ..... Mobile
J. D. Bush, M. D. ..... Gadsden
E. L. Strandell, M. D. ..... Brewton
John W. Davis, Jr., M. D. ..... Montgomery
J. Garber Galbraith, M. D. ..... Birmingham
H. G. Hodo, M. D. ..... Fayette

State Health Officer
Ira L. Myers, M. D. ..... Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1971
Delegate—M. Vaun Adams, M. D. ..... Mobile
Alternate—E. L. McCafferty, Jr., M. D. ..... Mobile
Delegate—P. W. Burleson, M. D. ..... Birmingham
Alternate—Robert Parker, M. D. ..... Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. .. Fairfield
Alternate—W. E. White ..... Anniston

CONTENTS

President's Page 624

The Woman's Auxiliary 626

Editorial Comment 629

Healing The Sick Is Still What Medicine's All About 629

The Doctors Bear The Brunt Of It 630

Guest Editorial—Changing Concepts in Anesthesia 630

Physician Placement Service in Alabama 636

Scientific Section 641

An Evaluation of Liver Function Tests in the Differential Diagnosis of Jaundice, Michael Weinrib, M. D., Montgomery, Alabama; John W. Schaefer, M. D., Denver Colorado; and Yoichi Oikawa, M. D., Cincinnati, Ohio 641

Common Misconceptions In Inhalation Therapy, Part IV, Respirators and Their Applications, D. S. Tysinger, M. D., Dothan 644

Fathers and Sons in Medicine 650

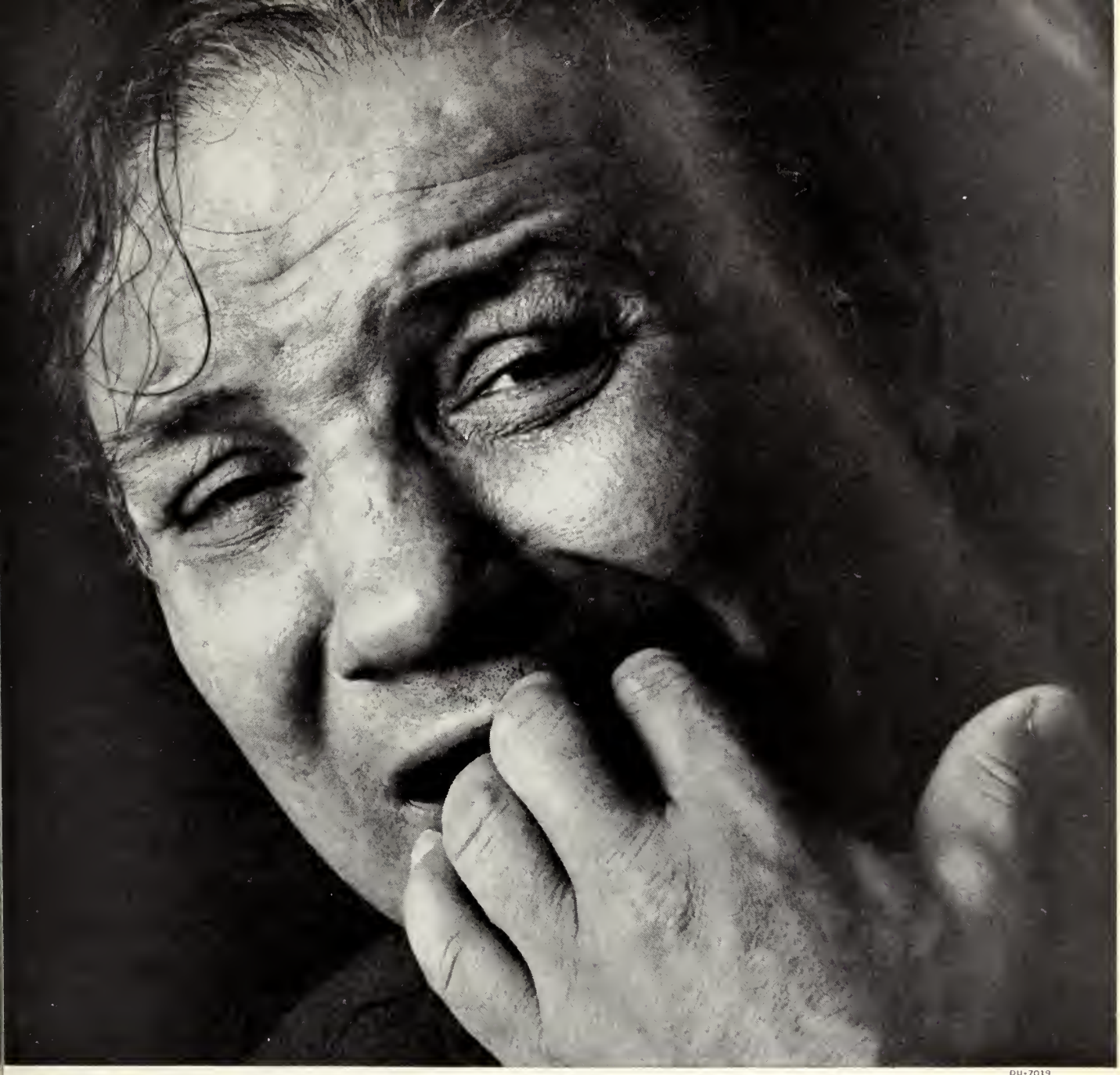
The Brunsons Practice in Enterprise and Samson 650

Program of the 110th Annual Session 655

Around the State 678

Vital Statistics 678

Century-Old Doctor's Office a Medical Museum 682



DU-7019

Who's afraid of the big bad enema?

We all are. But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can – except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents", and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable

bisacodyl

GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G.M.B.H.

President's Page

O. Emfinger, M. D.

Since this is my last opportunity to speak to the membership of the Medical Association of the State of Alabama from the pages of the *Journal*, I wish to take time and space to express my sincere gratitude to all of those who have aided me in this task since I assumed the role of Acting President in October, 1970 when the late Dr. Buford Word became ill.

I would like to thank the Board of Trustees and all committees of that Board for their dedicated co-operation in all tasks with which they have been confronted. The Board of Censors has been of inestimable help on any problems which I have presented to them.

To the people without whom it would have been absolutely impossible for me to perform my duties, of course you all know that I refer to the Central Office staff. Not one time have I requested help on any problem that it was not given willingly, pleasantly and efficiently. To Mr. Pat Patterson and all of his staff, I wish to say a great big "Thank You."

When Dr. Archie Thomas assumes the duties as President of the Medical Association of the State of Alabama at the Annual Session in Birmingham, Alabama on 17th April 1971, all that help which has been offered to me during the past six months will automatically be available at his request. I'm sure this is a comforting thought to Dr. Thomas. I wish to take this opportunity to wish him a very successful year as president of our Association and to offer my limited ability in performance of any task which he may so designate for me.

My tenure in office has been worth more to me in all probability, than it has to the Association.

I hope that I have grown in stature enough that I may be of more value to the Medical Association of the State of Alabama in the future than in the past. Certainly working with all the people mentioned above is a stimulating and educating experience.

I am looking forward to seeing all of you in Birmingham, Alabama at the Annual Session, April 15-17.

May God Bless all of you.

O. Emfinger, M.D.

O. Emfinger, M. D.
President
The Medical Association
of the State of Alabama

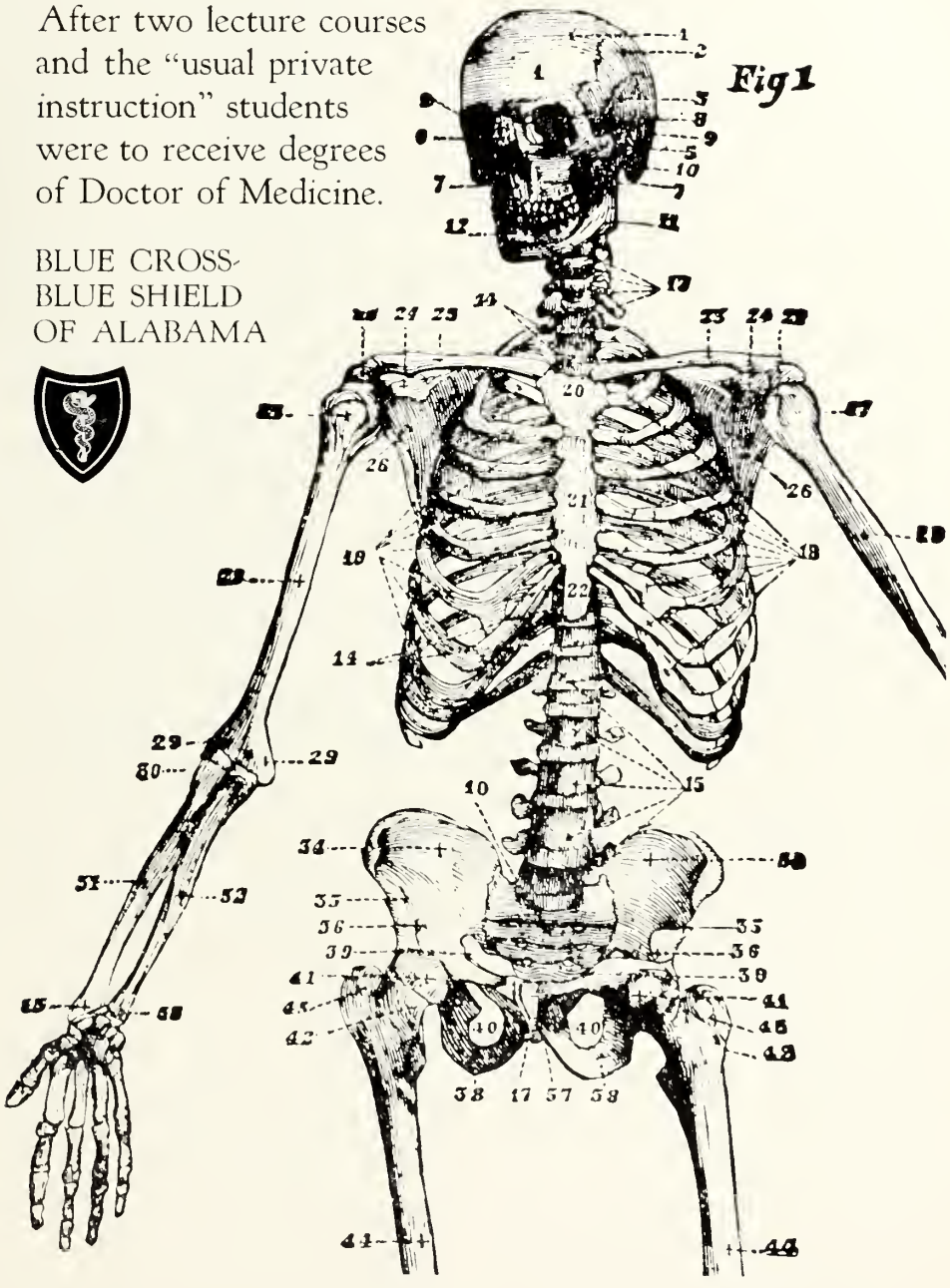
One-Sentence Essay

I am sick and tired of having a lot of long-haired people around here who want a billion dollars for schools, a billion dollars for public health.

—Franklin D. Roosevelt, 1939

In 1845 the Alabama Legislature authorized the establishment of a Medical College. After two lecture courses and the "usual private instruction" students were to receive degrees of Doctor of Medicine.

BLUE CROSS-
BLUE SHIELD
OF ALABAMA



The Woman's Auxiliary

President, Mrs. Howard C. Johnson
President-Elect, Mrs. Gilder Wideman
Northeast District Vice President, Mrs. James D. Holliman, Jr.
Northwest District Vice President, Mrs. George Hansberry
Southeast District Vice President, Mrs. D. S. Tysinger
Southwest District Vice President, Mrs. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

As I write this, my last message to you, I realize how quickly this year has passed. I am quite sure it is because the Auxiliary has been so active. You can well be proud of these activities, and the successfully attained goals.

Community Health encompasses all services of the Auxiliary in local communities. It covers programs too numerous to list, and runs the gamut of all activities within and outside medicine. The Auxiliary's role in the community has been of a catalystic nature. We have brought groups together on projects, cooperated with other service organizations, and have participated as individual members in areas where we have the greatest interest and talents. The communities know that we are actively interested and concerned with health problems.

Emphasis on Health Careers was our response to the medical manpower shortage, and appeals from the AMA for assistance in alleviating this situation.

You, too, have played a vital role in the successes of the Auxiliary. We are grateful to you for your contributions to AMA-ERF through the Auxiliary Fund, and for your contributions to the International Health program.

The Advisory Council for the Auxiliary, Doctors John Chenault, Chairman, Howard C. Johnson, Gilder Wideman, Vaun Adams, and William L. Smith have been tremendous in evaluating and guiding us in our varied program. Let me take this opportunity to express my deep appreciation to Mr. L. P. Patterson, Executive Director of MASA, for his personal assistance to the Auxiliary. He was never too busy to give his good, sound, and sincere advice. It is impossible to adequately thank Nell Williford of the Central Office for the many "extras" she did beyond the call of duty for the Auxiliary this past year. Also, let me thank the entire Office Staff for the many courtesies extended me.

Mrs. Howard C. Johnson

The success of any organization depends upon the interest and cooperation of its members. Their enthusiasm and high spirited cooperation makes me feel I stand two feet taller. It has been a distinct honor, and indeed a privilege to serve as your Auxiliary's President.

Camille Johnson

Camille Johnson

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

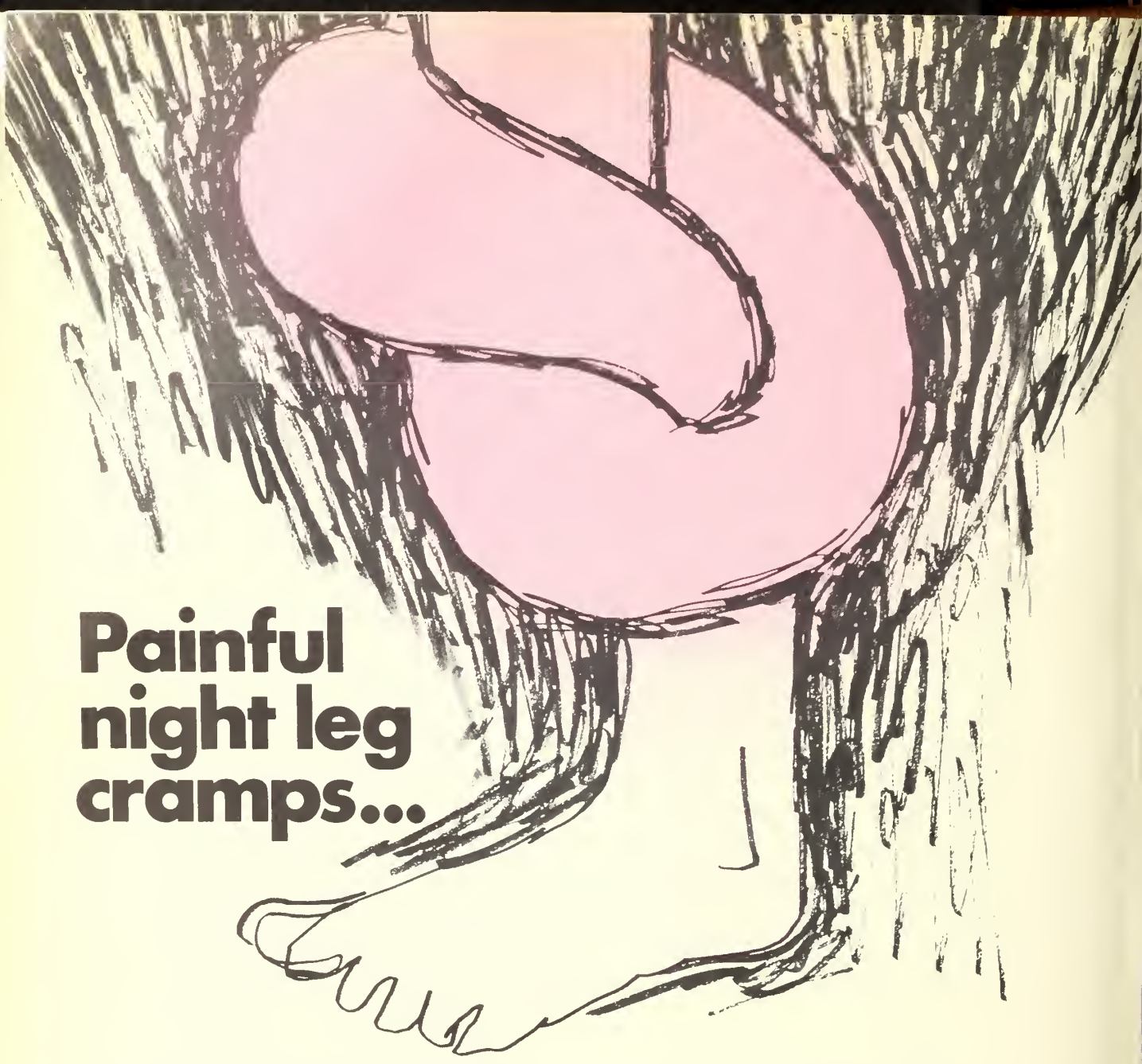
Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic* phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, on additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Informotion—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indicotions:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Controindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precoutions/Adverse Reoctions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosoge:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

Q103 2/71

Healing The Sick Is Still What Medicine's All About

No one benefits from inflation, least of all the doctor.

. . . In periods of inflation he has to increase the salaries he pays his secretary, his nurse and his technician. He has to pay more for services, and it can only come from the fees he charges. He is further burdened with very rapidly rising premiums on his malpractice insurance. This is a new and disturbing factor to many doctors.

. . . Health today is a public issue, and American physicians must contribute positively to the dialogue . . . Medicine's real concern is with the health of people. Healing the sick is still what medicine is all about.

Lifted out of context, this is pretty much what Walter C. Bornemeier, M. D., president of the American Medical Association, had to say recently in an interview.

He said many other things in the course of his challenge to HEW, to the news media, and to an array of distorted statistics all combined in a bald and biased attack on the image of medicine.

For example there is that widely publicized contrast of this country's medical records with those of other countries. Take for instance the figures on infant mortality. Here in the United States, any sign of life at all qualifies a child as a live birth. In Sweden, a child does not enter the statistical universe until sometime later, possibly as long as a year after birth!

The very fact that Medicare worked at all is due to the efforts of the very physicians who opposed it. But they receive no credit for that. On the contrary, a concerted effort has been made to put the entire medical-care cost monkey on the back of medicine.

"The major factor in rising medical cost and the over-run of cost of Medicare has not been physicians' fees but rather hospital costs."

That quote also is from Dr. Bornemeier. It is significant because physicians' fees and hospital costs are generally equated these days outside the medical profession, and for no better reason than that it was once true. It is no longer true.

Back in 1921, when the Alabama Hospital Association was born, its first president was a doctor, and so were the four who followed him, including Dr. James M. Mason of Birmingham (1926-28). Fourteen years later Dr. Mason would serve a term as president of the Medical Association of the State of Alabama. Five more doctors would serve as A. H. A. presidents, the last one D. S. Moore, M. D., also of Birmingham, 1942-43.

Of the 28 who have followed Dr. Moore, to Willis S. Thrash of Birmingham, 1971, not a single M. D. has been elevated to the A. H. A. Presidency.

Which statistics tell their own story, and quite effectively.

The Doctors Bear The Brunt Of It

Public apprehension about the nation's drug supply, resulting from release of a list of products deemed by the Food and Drug Administration to be ineffective, is unfounded, said the President of the Pharmaceutical Manufacturers Association.

"Many of the products listed had already been withdrawn from the market voluntarily, some of them long before FDA review," C. Joseph Stetler explained. "Others are listed because certain claims call for possible labeling changes. Others involve scientific issues not yet resolved. Still others await review of new evidence submitted by the companies. And a good many are of such little importance that they cannot be found in comprehensive lists of drug products."

"There was absolutely nothing new in this listing," he said. "All items had previously appeared in the Federal Register."

"No question of safety is involved," the PMA president emphasized, "but casual and repeated references to the word 'ineffective' have led to public confusion that is needless and could even be dangerous to patients who might not take medicines prescribed for them".

The FDA list is a compilation of products, ranging from toothpastes to prescription drugs, that have been the subject of discussions as well as formal administrative proceedings over the last 2½ years.

In referring to the drug list released by the FDA to federal agencies and the press, Stetler noted that the primary problem relates to certain types of evidence to be submitted, under new standards, to "prove" effectiveness, even though a great many products have been widely used in medical practice, and certified as safe and effective by the FDA, for a good many years.

(Editor's Note: And be very certain that the primary result of this ill-advised release of the FDA list is to undermine the confidence of patients in their individual doctors and perhaps vitiate the results of psychosomatic treatment.)

GUEST EDITORIAL

Changing Concepts In Anesthesia

The recent introduction of a new concept of pain control during surgery—"dissociative anesthesia"—has opened a new era in the search for simpler and safer methods to induce unconsciousness and insensitivity to pain during surgery. Since the invention of general anesthesia, more than 100 years ago, concepts and means for achieving surgical anesthesia have undergone frequent changes. During the initial era of chloroform and ether it became apparent that with these agents complete control of surgical pain could not be achieved without some cost to the patient's well-being. Awareness of the adverse and potentially dangerous side effects of these "protoplasmic poisons" stimulated the search for anesthetic drugs and methods which would produce general anesthesia with minimal disturbance of vital organ functions.

Highly effective and versatile anesthetic gases and vapors, such as cyclopropane, halothane, and methoxyflurane, have since been introduced. With the clinical use of these advanced anesthetic agents the incidence of side effects has been significantly reduced.

The introduction of d-tubo curare into clinical anesthesia further lessened the occurrence of adverse reactions in response to

surgical anesthesia, since this drug could provide complete muscle relaxation in lighter planes of anesthesia with less likelihood of disturbing homeostatic controls.

In exploring other means of reducing deleterious effects of surgical anesthesia, "balanced anesthesia" came into use. With this method a combination of anesthetics and anesthetic adjuvants is employed to achieve an even course of relatively light surgical anesthesia, with each agent used to its optimal capacity.

In spite of these successful efforts to improve the effectiveness and safety of anesthetics and the methods for their administration, little progress has been made in the development of anesthetic drugs capable of producing general anesthesia without interfering with autonomic, metabolic, and endocrine controls.

In assessing the pharmacologic characteristics of general anesthetics it becomes apparent that they have one property in common: Their depressant effects on various areas of the central nervous system do not allow for discrimination between nerve structures involved in wakefulness and pain perception as opposed to nerve elements controlling other vital functions. Therefore, when administered in sufficient concentrations, conventional anesthetic agents induce loss of consciousness and insensitivity to pain while simultaneously interfering with autonomic activity involving respiratory, cardiovascular, metabolic, and hormonal functions. The depth of anesthesia with these agents depends entirely on the extent of inactivation of cortical, subcortical, and spinal neurons. The more complete the depressant effect of anesthesia on the superficial and deeper brain centers, the more profound are the disturbances in the function of the vital organs.

For this reason, recent research in anesthesia has focused on the development of agents capable of selectively blocking pain conduction and perception, thereby moving away from total depression of the central nervous system with its inherent hazards. With the recent introduction of ketamine hydrochloride, a phencyclidine derivative, an important step has been taken in this direction. This clear, water-soluble liquid, when injected into a vein or muscle, instantly produces a peculiar state of unconsciousness in which the patient appears not to be asleep or anesthetized but rather "disconnected" from his surroundings. Extensive pharmacologic studies carried out in laboratory animals and subsequently in prison volunteers strongly suggested that the depressant action of ketamine is highly selective, affecting the neocortical-thalamic systems more intensely than the reticular activating and limbic systems. Particularly interesting was the observation of ketamine's ability to stimulate one area of the brain while simultaneously depressing another area. This unique pharmacologic characteristic of the drug is defined as "dissociation," and the anesthetic state produced is termed "dissociative."

The selective action of ketamine and its ability to produce anesthesia by dissociation may explain why the anesthetic state achieved with this agent does not fit into the conventionally accepted classification of stages and planes of anesthesia. From evoked-potential studies conducted in man, it could be documented that under the effect of ketamine peripheral impulses such as light flashes directed into the human eye reach the primary sensory cortex without being interpreted by the individual, indicating that the sensory isolation occurs within the brain, presumably in the association area.

Most important appears to be the finding that the ketamine-induced dissociative state renders the patient unconscious and pain-free while homeostatic mechanisms are unaffected and reflex activity is preserved. The ability of ketamine to provide adequate anesthesia through dissociation while minimally interfering with vital organ functions and autonomic controls is a property not shared

by traditional general anesthetics. It appears that with the introduction of ketamine and the new concept of dissociative anesthesia, a major step has been taken toward the development of safer, simpler and more selective anesthetic agents.

Guenter Corssen, M. D., Birmingham

Professor and Chairman
Department of Anesthesiology
University of Alabama in Birmingham
The Medical Center

"There will be no tax increase until we have exorcised the welfare cancer eating at our vitals."

—California Gov. Reagan

Accident Prones Under 20

Don't trust anyone under 20 years of age—when it comes to being accident-prone in an office environment, warns a Health Insurance Institute bulletin.

A five-year life insurance company study of office accidents showed that falls are the single greatest cause of disabling accidents and that employees under 20 are the most accident-prone of any age group.

The accident rate dropped through ages 30 to 59, the study found, then rose slightly between the ages of 60 to 64.

The study also indicated that while male office workers have about as many accidents as females, men sustain more disabling ones.

---

one capsule for the rest of the night

NOLUDAR® 300

(methyprylon)

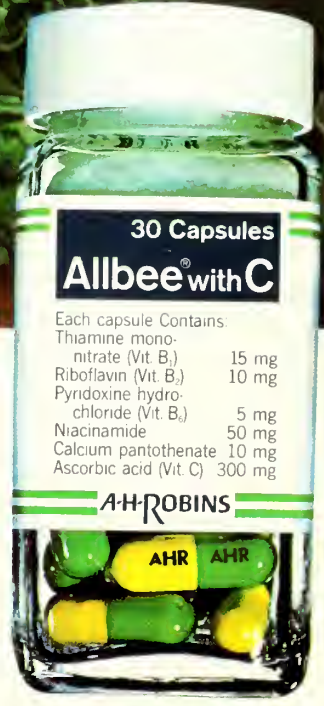
Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

2 ways to give your patients a month's therapeutic supply of Vitamin C:

40 pounds of spinach or 30 Allbee® with C



Although raw spinach is an excellent source of vitamin C, your patient would have to eat 40 pounds a month (about 1⅓ lbs. a day) to get as much ascorbic acid as is contained in just one bottle of 30 Allbee with C capsules (taken one capsule daily). If the spinach is cooked, a person would have to ingest more than twice as much because cooking destroys much of the vitamin C, and still more is lost when the liquid is drained off. Allbee with C also contains therapeutic amounts of B-complex vitamins. This handy bottle of 30 capsules gives your patient a month's supply at a very reasonable cost. Also the economy size of 100. Available at pharmacies on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

vacation in a vial: the spasm reactors in your practice deserve

"the Donnatal® Effect"

	each tablet, capsule or 5 cc. of elixir (23% alcohol)	each Donnatal No. 2	each Extentab®
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.
(Warning: may be habit forming)			

Brief Summary. Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

A·H·ROBINS

Health Legislation Hurt?

Dr. John Knowles, the man who almost became the government's top medical official, said last week that the ousting of Sen. Edward Kennedy (D-Mass.) as Senate majority whip may "hurt health legislation" in Congress.

Knowles, whose appointment as assistant HEW secretary for health was withdrawn following opposition by the American Medical Assn., said the Kennedy "winging" shows a conservative trend in Congress.

Kennedy will be a principal sponsor of national health insurance in the Senate this year, a compulsory plan to finance medical care for all Americans . . .

—Chicago Sun-Times

How To Fix Responsibility

If the courts were as generous in airline-accident suits as they are in medical malpractice litigation, fares would be priced out of reach of most passengers and no planes would fly except in good weather.

Lifted out of its quotes and its context, this statement was in a letter to the editor of The Wall Street Journal from an M. D. in New Mexico. And as an illustration he cited the award of $50,000 to a hepatitis victim of a blood transfusion, though there was then no existing way of finding this virus beforehand.

So long as the traveling public is entitled to choose its own method of transportation, so long as the ailing individual may select his own doctor, and, as a matter of fact, so long as the romantically inclined may pick out their own mates, just who is culpable, who is responsible for the mistakes?

They used to blame the railroad every time a cow wandered onto the right-of-way, in the path of a speeding train. But the open range was outlawed a long time ago.

The Politics Of Ecology

Daisies in a garbage can are the dust-jacket illustration for an important new book titled "The Politics of Ecology," published by Dutton of New York and bylined by James Ridgeway, young New York writer who already has attracted attention with his attack on the university-industrial complex under the caption, "The Closed Corporation."

Called a nationwide handbook for survival, the work charges that air-and water-pollution reforms in the last decade "have not halted or even slowed the rate of pollution," that the Nixon policies "actually work to legitimize and spread pollution," that many companies which create most of the energy and cause the pollution are actual leaders in the anti-pollution crusade, and that many towns and cities in the United States do not possess the rudimentary equipment for treating sewage recommended as far back as 1900.

"The Politics of Ecology" undertakes to expose the political under-belly of post-industrial America after first stripping the subject of its "current modish hysteria," revealing it as a dull, complicated subject "involving lawyers, doctors, sewermen and industrialists." If one overlooks the fact that it is written by a professional iconoclast, the book will prove interesting and enlightening.—M.

More About That Filthy Weed

Tobias Venner (1577-1660) had his own opinion about smoking and wrote about it as follows: "Tobacco drieth the brain, dimmeth the sight, vitiateth the smell, hurteth the stomach, destroyeth the concoction, disturbeth the humors and spirits, corrupteth the breath, induceth a trembling of the limbs, exsiccateth the windpipe, lungs and liver, annoyeth the milt, scorcheth the heart, and causeth the blood to be maladjusted."

—Delaware Medical Journal

'N PLACEMENT SERVICE IN ALABAMA

e Physician Placement Service of the Medical Association of the te of Alabama is designed to assist both physicians and communities. .ASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

.ocations Wanted

General Practice—

Age 28; Medical College of Alabama, 1967; National Board; serving general surgery residency Available July 1971. LW-3

Age 49; University of Pittsburgh, 1951; seeking group or industrial practice. LW-3/1

Age 27; George Washington University 1969; National Board; Available July 1971. LW-3/2

Internal Medicine—

Age 34; Georgetown University, 1962; Board certified; seeking group or associate practice. Available August 1971. LW-4

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 33; Medical College of Alabama, 1963; National Board; Available January 1971. LW-4/1

Age 30; New York University, 1965; Board eligible; National Board; interest in cardiology. LW-4/2

Age 31; University of Arkansas, 1964; Board certified; seeking group or associate practice, interest in cardiology. Available July 1971. LW-4/3

Age 31; Albert Einstein College, 1964; National Board, seeking group, associate or institutional practice. Available July 1971. LW-13

Age 34; Louisiana State University, 1963; Board certified; seeking group practice. Available August 1971. LW-13/5

Age 50; McGill University, 1948, Board certified, seeking solo, group, or associate practice, interest in gastroenterology. LW-4/4

Obstetrics-Gynecology—

Age 34; New York Med. College, 1964; National Board, Board eligible; seeking group or associate practice. Available August 1971. LW-5/1

Age 38; University of Georgetown, 1959, National Board, Board certified, seeking group practice. LW-5/2

Ophthalmology—

Age 30; University of Nebraska, 1965; seeking group or associate practice. Available July 1971. LW-6

Age 34; Yale University, 1964; National Board, Board certified; seeking solo, group, industrial or associate practice. Available July 1971. LW-6/1

Age 35; Louisiana State University, 1963; Board eligible, seeking group or associate practice. Available January 1972. LW-6/2

Orthopedic Surgery—

Age 32; University of Illinois, National Board, seeking associate practice. Available February 1972. LW-14

Otolaryngology—

Age 33; Loyola University, 1964; Board eligible; seeking solo or associate practice. Available July 1971. LW-7

Age 33; Wayne State University, 1966; Available July 1971. LW-7/1

Age 31; Northwestern University, 1964; Board eligible; National Board; seeking solo, group or associate practice. Available September 1971. LW-7/2

Pathology—

Age 32; Case Western Reserve University, 1964; National Board; Board certified; seeking group, associate or institutional practice. Avialable August 1971. LW-8

Age 33; Creighton, 1964; Board certified; National Board; seeking group or associate practice. Available July 1971. LW-8/1

Age 30; University of Texas, 1967; seeking solo, group or associate practice. Available March 1971. LW-22

Age 39; Ankara Medical School, Turkey, 1956; Board eligible; seeking associate practice. LW-8/2

Pediatrics—

Age 31, American University of Beirut, 1967; Board certified; interested in pediatrics/pediatric cardiology. seeking group or associate practice. Available July 1971. LW-9/1

Radiology—

Age 31; University of Kansas, 1965, seeking group practice. Available July 1971. LW-10

Age 32; Medical College of Alabama, 1963; completing residency in radiology. LW-24/2

Age 31; Vanderbilt University, 1965; National Board; Board certified; seeking group or associate practice. Available July 1971. LW-10/1

Age 35; University of North Carolina, 1961, Board eligible; Available early 1971. LW-10/2

Age 30; University of Kentucky 1965; Board eligible; seeking group, or associate practice. Available July 1971. LW-10/3

Surgery—

Age 30; Medical College of Alabama 1965; National Board; Board eligible; interested also in general practice with surgery; Available July 1972. LW-11

Age 31; Medical College of Alabama 1964; National Board. Available July 1971. LW-31/6

Age 33; University of Tennessee 1963; Board eligible; seeking solo, group, associate or institutional practice. Available July 1971. LW-11/1

Age 33; Emory University 1964; Board eligible; seeking solo, group or associate practice. Available July 1971. LW-11/2

Locations Wanted

Age 35; West Virginia University, 1964; Board eligible; interested in thoracic and cardiovascular surgery; group or associate practice. Available July 1971. LW-11/3

Age 46; Duke University, 1953; National Board, Board certified; seeking group, associate or institutional practice. Available summer 1971. LW-11/4

Age 37; University of Montreal, 1959; Board eligible, seeking solo, group, or associate practice, interest in plastic surgery with or without general surgery. Available summer-fall 1971. LW-11/5

Urology—

Age 33; University of Chicago 1963; Board eligible; interested in academic affiliation. Available August 1971. LW-12

University of Illinois, 1964, National Board, Board eligible; seeking solo, group or associate practice. Available July 1971. LW-12/1

Physicians Wanted

Special Openings—

Qualified specialists wanted for private practice in internal medicine, general surgery, Ob-Gyn, general practice, pediatrics, anesthesiology, orthopedics, and other sub-specialties. Office space in 250-bed private hospital, Guaranteed initial income and other benefits. PW-17

General surgeon, Board certified, needs young associate to do general practice including obstetrics. Salary negotiable. PW-19

Two physicians, ages 39 and 40, are interviewing for a select individual to enter association in a university town of 80,000 population. Outstanding new physical plant. Readily available hospital privileges. Four and one-half day work week. Three free weekends per month. PW-19/2

Opportunity for ENT, Internal Medicine, and Orthopedic Surgery practitioners to join partnership at clinic located in city of 38,000 population in trade area of 150,000 population in northeast Alabama. PW-20/2

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Opportunity in town of 4,000 population in trade area of 50,000 population, located within 100 miles of two metropolitan areas in south Alabama. Industrial and farming area. 44-bed hospital. Office space and equipment available in new building with another physician. Several churches, schools, and service clubs. PW-1

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

For town of 10,000 population in county of 40,000 population located in scenic mountainous section of Northeast Alabama. Office space and equipment available. Hill-Burton hospital-nursing home. Expanding industries in top agricultural area. PW-1-2

Physician wanted to join 39 year old Medical College of Alabama graduate in a well established practice in West Central Alabama town. Salary initially followed by full partnership. PW-1-4

Hospital based professional association in suburb of Birmingham is seeking a young general practitioner who has completed military obligation. High income, profit sharing, paid vacation and retirement plan. Complete facilities available. No investment required. PW-1-5

Opportunity in town of 2,500 population in Northeast Alabama in trade area of 15,000 population, located 7 miles from city of 55,000, and four miles from a 300-bed modern hospital. Position available for one who has not served military commitment. Clinic building and some equipment available. Willing to build a new clinic for two doctors or a small group. Especially seeking general practitioner and internist. PW-1-7

Opportunity for two general practioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

(Continued on Page 639)

when manhood ebbs... or is delayed due to testicular hormonal insufficiency

What nature denies, Halotestin may replace. That's the purpose of this orally active androgen in conditions such as impotency, eunuchoidism, and eunuchism. The most widely used agent of its kind, Halotestin is replacement therapy with approximately five times the potency of oral methyltestosterone. And, at its recommended daily dosage of 2 to 10 mg., Halotestin is economical as well as convenient. Of course, you will want to employ androgens carefully in young boys to avoid premature epiphyseal closure... and in the elderly where possible sodium retention may, minimally, precipitate edema. Tablets of 2, 5, and 10 mg.

Halotestin® 5 mg. tablets

(fluoxymesterone Upjohn)

oral replacement with parenteral-like potency

Please see facing column for summary of contraindications, precautions, and adverse reactions.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

Halotestin®
(fluoxymesterone, Upjohn)

Orally active androgen about 5 times as potent in anabolic and androgenic activity as methyltestosterone. Halotestin (fluoxymesterone) induces significant retention of calcium and potassium, but retention of sodium not marked. Doses below 20 mg. daily have little effect in producing creatinuria.

Indications *Male:* Replacement therapy in testicular hormone deficiency states. Prevents atrophy of the accessory male sex organs following castration for as long as therapy is continued. Impotence and male climacteric symptoms when due to androgen deficiency. Primary eunuchoidism and eunuchism. Delayed puberty when established as not a simple familial trait. Indicated for those symptoms of panhypopituitarism related to hypogonadism, however, appropriate adrenal cortical and thyroid hormone replacement therapy remain of primary importance. *Female:* Palliation of androgen-responsive, advanced, inoperable breast cancer in women between 1 and 5 years postmenopausal or women in whom castration has shown the tumor to be hormone dependent. Prevention of postpartum breast manifestations of pain and engorgement; there is no satisfactory evidence that this drug prevents or suppresses lactation per se. In osteoporosis androgens may be of adjunctive value to adequate considerations of diet, calcium balance, physiotherapy and general health promoting measures. *Males and Females:* In the treatment of protein depletion states which occur in geriatric patients, in debilitation states, in chronic corticoid therapy, resistant fractures; cryptorchidism; creating a positive nitrogen balance, tissue repair and other anabolic effects. Androgenic steroids may produce a response in aplastic anemias, myelofibrosis, myelosclerosis, agnogenic myeloid metaplasia and hypoplastic anemias due to malignancy or myelotoxic drugs. Androgens are not of value in other anemias.

Contraindications Pregnancy (may virilize female fetus), mammary carcinoma in the male, prostatic carcinoma, severe liver disease, severe cardiorenal disease and severe persistent hypercalcemia.

Precautions Employ with caution in young boys to avoid precocious sexual development and premature epiphyseal closure. Androgens tend to promote retention of sodium and water, therefore, watch for edema—particularly in the elderly. Incidence and severity of edema have been minimal and have been associated only with high doses used for palliation of breast cancer. Hypercalcemia may occur, particularly in patients with metastatic breast carcinoma; if this occurs the drug should be discontinued. Changes in liver function tests, such as increased BSP retention and SGOT levels, can occur during therapy. Jaundice has been rarely reported. If liver function tests are altered, discontinue medication or reduce dose. Priapism is indicative of excessive dosage and is indication for temporary withdrawal of drug. When treating protein depletion states or osteoporosis, an adequate diet should be provided and prolonged immobilization avoided whenever possible. When treating aplastic or hypoplastic anemias, androgen therapy should not replace other measure such as transfusion, correction of iron deficiency, antibacterial therapy, and the use of corticosteroids.

Adverse reactions Nausea, dyspepsia, menstrual irregularities, hepatic dysfunction, priapism, edema, precocious sexual development, and premature epiphyseal closure in young patients have been reported. *Male*—Prolonged administration or excessive dose may cause inhibition of testicular function with oligospermia and decreased ejaculation volume. *Female*—Large doses or prolonged administration may produce masculinization with signs such as hirsutism, deepening of the voice, enlargement of the clitoris, acne, and sometimes, increased libido.

Supplied *Tablets: 2 mg.*, scored—bottles of 100./ *5 mg.*, scored—bottles of 50./*10 mg.*, scored bottles of 50.

For additional product information, see your Upjohn representative or consult the package circular.

Upjohn The Upjohn Company, Kalamazoo, Michigan

V6-7627-R MED 8-5-5 (LQX)

PLACEMENT SERVICE

(Continued from Page 637)

Associate needed in general practice and surgery in northeast Alabama town of 6,000 population. Modern 70-bed hospital. Prefer doctor less than 40 years of age. Salary guaranteed first year, then partnership. PW-1/9

Opportunity for one or two physicians (two general practitioners or one general practitioner and one surgeon) in rural community in north Alabama near Tennessee state line. Guaranteed salary. 41-bed general hospital, fully equipped, plus outpatient clinic adjoining. Housing available. PW-25

"We had assumed that if a woman gave a man the privileges of a husband that the man should assume the responsibilities of one, but the Supreme Court said that was illegal," said Louisiana Department of Welfare Commissioner Garland Bonin, as that State cut $3 million from Medicaid.

—AMA News

Not just a motel
it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone® Liquid 250

Erythromycin Estolate

(equivalent to 250 mg. of base per 5-ml. teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*

Lilly

100204

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Volume 40 April, 1971 Number 10

An Evaluation Of Liver Function Tests In The Differential Diagnosis Of Jaundice

By: Michael Weinrib, M. D., Montgomery, Alabama

John W. Schaefer, M. D., Denver, Colorado

and

Yoichi Oikawa, M. D., Cincinnati, Ohio

It is generally agreed that biochemical tests are helpful in the diagnosis of hepatobiliary tract disease. Recently clinicians have come to regard the serum bilirubin (SB), serum alkaline phosphatase (SAP), serum glutamic oxaloacetic transaminase (SGOT) and serum glutamic pyruvic transaminase (SGPT) as of greater diagnostic value than the serum protein-dependent flocculation and turbidity tests, and many depend upon them exclusively. This attitude is fostered by the widespread inclusion of the SB, SAP, and SGOT in the chemistry profile on the automated multi-test chemical analyzers.

This report concerns the results of a prospective study undertaken to evaluate the relative diagnostic contribution of the SB, SAP, SGOT and SGPT, hereafter referred to as the "basic" tests, compared to the serum protein-dependent tests, including cephalin cholesterol flocculation (CF), thymol flocculation (TF), thymol turbidity (TT) and zinc sulfate turbidity (ZST).

From the Department of Internal Medicine, Gastric Laboratory, University of Cincinnati College of Medicine and Department of Internal Medicine, Cincinnati Veterans Administration Hospital, Cincinnati, Ohio.

Methods and Materials

Fifty-two unselected jaundiced patients, admitted to the Cincinnati General Hospital between August, 1964 and April, 1965, were evaluated independently shortly after entry by two or three examiners. Each examiner recorded his diagnosis in three stages: (1) after examination of the patient; (2) after learning the results of the "basic" tests; and finally (3) after benefit of the protein-dependent tests. He then judged each set of tests as "compatible" or "incompatible" with the final diagnosis.

Rigid rules were not applied in the interpretation of the function tests, but several generally accepted criteria were employed. Serum transaminase values in excess of 750 Sigma-Frankel units were considered characteristic of acute hepatocellular disease. Positive flocculation and turbidity tests also favored parenchymal dysfunction. A serum alkaline phosphatase in excess of ten Bodansky units indicated significant intra- or extrahepatic cholestasis.

Histologic diagnosis was obtained in 33 of the 52 jaundiced patients studies: 26 by percutaneous needle biopsy, five by surgical

biopsy, and two by post-mortum examination. Excluded from the study were 12 patients lacking tissue diagnosis, eight of whom were too ill for liver biopsy and four of whom died with no autopsy obtained. Seven patients with abnormal but non-diagnostic liver biopsies were also excluded. The remaining 33 patients comprise the nucleus of the study.

Recorded in Table 1. is the diagnostic accuracy in stages of the 86 independent observations on the 33 patients with a proven diagnosis after initial clinical evaluation and after knowledge of the two groups of liver function tests.

Table 2. is a retrospective analysis of the usefulness of the grouped liver function tests based on the confirmed diagnosis. The tests were considered "compatible" when they strongly supported the diagnosis or at least were consistent with the evolutionary phase of the illness. Those tests inconsistent with the known diagnosis were judged "incompatible."

Discussion

As in an earlier study by Schenker et. al.[1], the overriding value of a careful history and physical examination in the differential diagnosis of jaundice is emphasized. With reference to Table 1. the correct clinical diagnosis was made in 76 of 86 (88 per cent) independent observations on the 33 patients with an established diagnosis. It is of interest that most of the clinical errors occurred in trying to distinguish between alcoholic hepatitis and cirrhosis with accuracies of 80 per cent and 85 per cent respectively. This is not surprising in view of the fact that the two entities frequently co-exist and may represent only different stages of the same pathogenic process[2]. In the present study concomitant alcoholic hepatitis and cirrhosis

TABLE 1.

DIAGNOSTIC ACCURACY WITH CLINICAL DATA AND GROUPED LIVER FUNCTION TESTS ACCORDING TO DIAGNOSTIC GROUPS IN 33 PATIENTS WITH PROVEN DIAGNOSES

	Viral Hepatitis	Alcoholic Hepatitis	Cirrhosis	Extrahepatic Obstruction	TOTALS
No. of proven cases	13	6	8	6	33
Total No. of observations	35	15	20	16	86
Clinical evaluation					
No. of correct diagnoses	32	11	17	16	76
% of correct diagnoses	91.4%	73.3%	85%	100%	88.3%
Clinical plus "basic" tests*					
No. of correct diagnoses	33	11	17	16	77
% of correct diagnoses	94.3%	73.3%	85%	100%	89%
Clinical plus "basic" and protein-dependent tests**					
No. of correct diagnoses	33	12	17	16	78
% of correct diagnoses	94.3%	80%	85%	100%	90.7%

* Includes: SB, SAP, SGOT, and SGPT

** Includes: CF, TT, TF, and ZST

TABLE 2.

RETROSPECTIVE ANALYSIS OF LIVER FUNCTION TESTS ACCORDING TO DIAGNOSTIC GROUPS IN 33 PATIENTS WITH PROVEN DIAGNOSIS

Pathologic Diagnosis	Viral Hepatitis		Alcoholic Hepatitis		Cirrhosis		Extrahepatic Obstruction	
Clinical Diagnosis	* Correct 13	Incorrect 0	Correct 5	Incorrect 1	Correct 7	Incorrect 1	Correct 6	Incorrect 0
"Basic" tests								
Compatible	13		5	1	7	1	6	
Incompatible	0		0		0		0	
Protein-dependent tests								
Compatible	13		5	1	5	1	6	
Incompatible	0		0		2		0	

* Diagnosis considered as "correct" when two or more observers made the correct diagnosis.

was documented in three of 14 patients. For purposes of the study, however, such patients were listed in the category of major importance leading to the patient's admission.

Table 2. shows that the results of both the "basic" tests and the protein-dependent flocculation and turbidity tests were almost always judged consistent with the patient's diagnosis. Nevertheless, as shown in Table 1., in only two of ten instances did these tests correct a false initial clinical impression. This reflects both the clinician's reluctance to abandon a firm clinical impression, and the non-specific help derived from the tests themselves, which are often compatible with more than one diagnosis, especially in the convalescent or chronic stage of hepatobiliary tract disease. It is accepted, however, that in the early phase of jaundice the "basic" tests, particularly serum transaminase and alkaline phosphatase, may be altered earlier and in a more specific way than the more slowly reacting protein-dependent tests. Herein lies the major advantage of the "basic" tests over flocculation and turbidity tests.

Summary

This prospective study of 33 jaundiced patients with a proven diagnosis confirmed the paramount importance of a careful history and physical examination, which alone yielded the correct diagnosis with an accuracy of 88 per cent. Of the ten errors in clinical diagnosis only two were corrected with the use of liver function tests for an overall accuracy of 90.7 per cent. The protein-dependent tests added little information not already provided by the serum bilirubin, alkaline phosphatase, and transaminase studies.

Bibliography

1. Schenker, S., Balint, J. and Schiff, L.: Differential diagnosis of jaundice: report of a prospective study of 61 proven cases. Am. J. Dig. Dis. 7:447, 1962.

2. Green, J., Mistilis, S., Schiff, L.: Acute alcoholic hepatitis. Arch. Int. Med. 112: 67, 1963.

What About Water Skiing?

Contrary to the old sportsman's tale, skiing does not rate as one of the most dangerous of the mass participation sports in the U. S., according to a clinical associate professor of orthopaedic surgery at State University of New York at Syracuse. Hunting, scuba or skin diving, pleasure boating, swimming and football all rank higher than skiing in fatalities and injuries, Dr. Mark R. Harwood told a postgraduate course on sports medicine sponsored by the American Academy of Orthopaedic Surgeons.

Common Misconceptions In Inhalation Therapy

Part IV Respirators and Their Applications

D. S. Tysinger, Jr., M. D.
Dothan, Alabama

In the first three issues, there was presented the basic physics and chemistry of humidity, particulate water, air flow, and pressure as they relate to the human lungs and the way they handle air. This issue will cover respirators, and what they do. It is recommended that first the previous three articles be read closely and the gas laws be reviewed so that they are fresh in the mind. Much that is said about respirators is false or only half true, and if inhalation therapy is to be a science it must get back to basic science and follow its teachings. Some forms of artificial respiration are quite old.

The first respirator to be practical and useful was the tank-type respirator. This was purely a time cycled machine. As far as air flow patterns are concerned, this is the most physiologic respirator. With this machine the negative pressure around the chest cage expands the chest in a normal manner. The production of subambient pressure in the alveolus is produced as it would be normally and the air flow and circulation within the lung itself is essentially the same as it would be with the individual breathing normally. The constantly changing pressures around the individual, which must be rather large to produce good ventilation, leads to deleterious effects in other parts of the body. (See CLINICAL RESPIRATOR PATIENT RELATIONS, Aug.: 1967, Vol.: 37, No.: 2, p.: 141-148.)

All respirators must be controlled and cycled by some device, either a mechanical time limiting movement, a volume limiting movement, or a pressure development which is sufficient to cause recycling. Most of the more popular machines on the market that are referred to as "volume cycle respirators" are those which are piston driven and which deliver a volume over a given period of time depending on the travel of the piston. Pressures can be developed sufficiently high to separate cellular attachments and cause interstitial emphysema and as pressure increases to rupture the lungs and cause pneumothorax. Some machines have the volume delivery modified so that a pre-set pressure will not be exceeded. They do not deliver the pre-set volume if the pressure is exceeded, venting volume off to the outside through the pressure release. To reassure the physician this type of equipment usually monitors the expiratory flow. In the last issue, this was discussed in some detail. Volume cycling became popular during World War II (the reader should study the works of Ottis Rahn & Finn as well as the work of Cornand, Motley, Werko, and Richards). The basic premise for the need of a cycled machine occurred as a result of the intermittent positive pressure machine over ventilating the patient to the extent that alkalosis was the usual result. The volume cycled machines could be limited so that this over ventilation did not occur. Now the proponents of the volume cycled machines speak of how *much* the volume cycle machine delivers and forget that their use was made popular because of how *little* they delivered. The volume cycle respirator and its basic use is predicated on the principle that if a pressure is developed in a dynamic phase and then that pressure is held in a static phase (plateau) then delivery will occur as a result of a dissipation of the pressure that is held and obstructed areas will be ventilated. This is a valid principle. The plateau principle should be applied in inhalation therapy. The unfortunate thing is that this plateau principle does not apply to the volume cycled respirators. It has been pre-

viously pointed out that one volume can only have one pressure, if compressed to one certain degree. Now, consider the delivery of air with a volume cycled respirator while one watches the pressure manometer if a plateau is being produced, the pressure will be highest when it is first produced. Then as this pressure is held and as flow starts into the areas that are obstructed by disease or turbulence, the pressure will fall until the total volume is delivered or until pressures are equalized. For the total volume to be delivered pressure must fall to zero before expiration starts. If pressure does not fall to zero, then the pressure existing at the beginning of expiration is an indication of that part of volume compressed and not delivered. To deliver 800 cc. into the lungs, a pressure will occur as a result of compression of this gas and this compressed volume must be held without change. As volume increases and air is delivered into the lungs the pressure returns to zero as the 800 cc. is delivered. If pressure does not return to zero before expiration then the pressure at the time expiration begins is due to gas still compressed and not delivered. This volume must be subtracted from the delivery volume registered in order to determine the actual volume that was delivered by the machine. In order, then, to determine plateau effect a peak pressure must be reached, followed by a slow fall preferably to zero (if the predetermined volume set is to be delivered instead of partially compressed). Volume delivery equipment usually causes a rapid rise to peak pressure followed by an almost instantaneous fall to zero as expiration begins at peak pressure and not following a fall in pressure as would occur if a plateau were being produced. From research studies an effective plateau cannot be produced at a rate greater than 12 per minute because at rates faster than this at either 50/50 or 1/3 to 2/3 inspiration to expiration, rate of change is so rapid that a plateau may be reached but is not sufficiently long to deliver any volume. The ideal breathing rate for plateau effect is about eight per minute. To deliver well, pressure should be developed rapidly and held as flow into the un-ventilated and obstructed areas begins. Volume cycled equipment does not adjust to changing compliance. In the last issue, it was pointed out clearly that with a machine with a fixed dead space, tubing, and nebulizer, etc., delivering a fixed volume, the only volume that can change is the functional residual capacity. With a fixed delivery volume or a fixed compression volume, as a pressure is reached, a certain per cent of this volume is compressed in order to produce the pressure and the remainder is volume delivered. What is measured is the volume compressed to produce the pressure and the remainder that is delivered. If the pressure increases there is more compression and less delivery; not compensation for compliance changes. An increased pressure means a reduced volume. The only volume that can change is in the patient. With a smaller volume, compression must be greater in order for the machine's piston to push through the same volumes set for delivery. Again, the only change in volume that can occur in this mechanical setup is within the patient. Since the pressure is higher, then the volume that air is put into has to be smaller to produce this higher pressure. Thus, fluctuating pressures mean compressing more and delivering less, not compensating for change in compliance. *One fixed volume can only produce one pressure for one volume compression.* This must be understood for successful results with a volume cycled respirator. It is important to point out that one of the successes of the volume cycle respirator as opposed to what has been said thus far, is the fact that the volume cycled respirator is in effect a very low flow rate machine. The volume is fixed and is delivered over a given period of time depending on the amount compressed. That air not compressed is delivered in this period of time at a rather slow rate due to low volume. This keeps down turbulence in the upper airway, and in the balloon area, due to low flow rates. The volume cycled respir-

ators as they are produced today have complicated dashboards that make computer keypunch equipment look simple. The unfortunate thing about this setup is, when working with volume limiting equipment to try to make it patient following, flow rate controllable, and pressure limiting is disastrous. Not only is volume limited but the patient gets into trouble because he now develops high negative pressures in the alveolus. This is not because of obstruction along the airway but because the volume has been spent at a fluctuating rate without satisfactory volume. Volume not being sufficient to the patient causes the negative pressure. When assisting ventilation why not use a machine that will do all this and also is not volume limiting—an IPPB machine? If a patient is to be allowed to control his own breathing, he must also be allowed to control his own volume with as low a pressure as possible. Volume-cycle respirators should not be used in any instances in which the patient can breath for himself and determine how much he wants to breath. Volume cycled equipment should only be used with the apneic patient.

Where intermittent positive pressure equipment is used, the idea is to fill the normally functioning lung before significant pressure starts to build up. There are essentially three types of machines in current use. The first type fulfills most of the criteria set down by Cornand, Werko, Motley, and Richards. They stated that the machine should supply sufficient volume flow and that the patient should not have to produce abnormal negative pressures due to the lack of volume. Therefore, most equipment was designed with rather excessive flow rates of 100 liters per minute. Thus, the first type of equipment turns on at 100 liters per minute. When the pre-set pressure is reached, it immediately turns off. This type of equipment is very inefficient. Turbulence occurs rapidly as was described in the previous part. The flow rate in the trachea alone, instead of being 3,000 cc/minute as it is in normal breathing, is in the neighborhood of 50,000 cc/minute which produces a great deal of turbulence. Instead of slowing down to 142 cc/centimeter in the tertiary bronchi as occurs in normal breathing the flow is still 2,381 cc/centimeter which causes considerable turbulence. This must be understood completely. Table VI presents the flow per minute, and assuming a 1/3 inspiration and 2/3 expiration, shows the flow per second down the tracheobronchial tree. This table was so designed that flow per second could be presented in the easiest form for comparison. In Table VII is presented the per second flow at 6 L/min. and 100 L/min. and the number of times increase of the flow rate produced by 100 L/min. This points out why flow rate obstruction occurs in the primary, secondary, and tertiary bronchi where flow rates are increased 16-17 times normal beyond which and because of which

Table VI

Segment	number of Bronchi	6 L/min. Flow	6 L.min.Flow cc/cm/sec. with 1/3 Inspiration 2/3 Expiration	100 L/min.Flow cc/cm/sec. with 1/3 Inspiration 2/3 Expiration	100 L/min. FLow
Trachea	1	3,000 cc/cm/min.	150 cc/cm/sec.	2,500 cc/cm/sec.	50,000 cc/cm/min.
Secondary bronchi	12	1,300 cc/cm/min.	65 cc/cm/sec.	1,000 cc/cm/sec.	20,000 cc/cm/min.
Tertiary bronchi	100	142 cc/cm/min.	7.0 cc/cm/sec.	120 cc/cm/sec.	2.381 cc/cm/min.
Quartenary bronchi	770	4.4 cc/cm/min.	0.6 cc/cm/sec.	1.85 cc/cm/sec.	37 cc/cm/min.
Terminal bronchi	6000	3.6 cc/cm/min.	0.18 cc/cm/sec.	1.12 cc/cm/sec.	32.4 cc/cm/min.
Respiratory bronchi	15,000	2.0 cc/cm/min.	0.1 cc/cm/sec.	0.84 cc/cm/sec.	16.85 cc/cm/min.
1st order alveolar ducts	300,000	0.9 cc/cm/min.	0.045 cc/cm/sec.	0.37 cc/cm/sec.	7.40 cc/cm/min.
2nd order alveolar ducts	4,000,000	0.7 cc/cm/min.	0.035 cc/cm/sec.	0.29 cc/cm/sec.	5.88 cc/cm/min.
Alveoli	10,000,000				

Table VII

Segment	6 L/min. cc/cm/sec.	100 L/min. cc/cm/sec.	The increase in flow of 100 L/min. over 6 L/min.
Trachea	150 cc/cm/sec.	2,500 cc/cm/sec.	16.7 Times
Secondary bronchi	65 cc/cm/sec.	1,000 cc/cm/sec.	15.4 "
Tertiary bronchi	7 cc/cm/sec.	120 cc/cm/sec.	17 "
Quartenary bronchi	0.6 cc/cm/sec.	1.85 cc/cm/sec.	3.1 "
Terminal bronchi	0.18 cc/cm/sec.	1.12 cc/cm/sec.	6.3 "
Respiratory bronchi	0.1 cc/cm/sec.	0.84 cc/cm/sec.	8.4 "
1st order alveolar ducts	0.045 cc/cm/sec.	0.37 cc/cm/sec.	8.2 "
2nd order alveolar ducts	0.035 cc/cm/sec.	0.29 cc/cm/sec.	8.3 "

delivery is not accomplished. Since comparison is made in this manner it should be obvious that the asthmatic who is a flow rate problem with doubled pressures and 16 to 17 times increase in flow rate cannot be and clinically are not ventilated by this technique and equipment. Also the turbulence in this small area due to this extremely high flow rate accounts for problems in delivery that cannot be over come by this high flow rate equipment. Where the nebulizer is run separately at 30 L/min. (which it must be) then flow rates are increased 20 times or more in the trachea, primary, secondary, and tertiary bronchi. Flow rate through the trachea on through the tertiary bronchi must be traveled by all air going to the lungs. Beyond the tertiary bronchi the flow rate will vary depending on the volume of the ventilated. This is the reason that this type of equipment produces such poor results in comparison to flow rate controlled equipment. This lack of basic knowledge almost ruined inhalation therapy in its infancy and is holding back its progress today. These high flow rates likewise neutralize the ballooning effect from the tertiary bronchi on down. It is so rapid that it turns the balloon flow to tubular flow with turbulence and obstruction. With this type of equipment insufficient alveolar flow causes a high negative pressure to be produced at the alveolar level. The extremely high flow rate causes turbulent obstruction prematurely before alveolar ventilation has occurred with a buildup of pressure which causes machine recycling. The makers of some equipment have made some compensation for this by either a poppit and spring flow sensitive control that works at the end of flow, or a rotating spindle that does the same thing. These machines have an opening flow of 100 liters per minute. They become sensitive at the terminal end of inspiration. The flow rate of 100 liters per minute makes flow sensitivity ineffective with cutoff occurring rather rapidly. The third type of IPPB equipment is that in which flow rate is controllable at the rate at which the average individual breathes. Flow rate can be adjusted and comfortable flows are not exceeded so that lung filling can occur. It should be obvious at this point that any initial flow greater than normal for the individual will reduce the balloon effect of the lungs and cause middle lung turbulence in the terminal and respiratory bronchi with pressure rise and machine recycling before complete alveoli filling actually occurs.

Making a machine flow sensitive does little to stop this. In an attempt to overcome this, some tried to make these machines flow rate controllable. To understand what happens with this equipment as well as with the volume cycled equipment that is flow rate controllable, is the fact that the nebulizer is driven separately from the flow that is controllable or monitored. This is side arm continuously nebulizing equipment in which the nebulizer flow is separate from the machine control flow. Flow rates are not controlled flow, since sufficient flow must be given to the nebulizer to make it work. When these nebulizers are run at six liters per minute, it is found that they are not sufficiently strong to be effective when the machine is running at one hundred liters per minute. To compensate for this, it was found that side arm nebulizers on equipment that has a 100 liter/min. initial flow must run about 30 liters per minute. Total flow of the IPPB machine and nebulizer comes to 130 liters per minute. If this machine has a flow rate control at 30 liters per minute flow with a nebulizer that is also running 30 liters per minute, then the total flow rate is 60 liters per minute. The only way to guarantee flow rate control is to be sure that all the flow that goes to the patient is controlled by the flow rate control mechanism before flow goes to the nebulizer and the patient. If this is not done, then there is no flow rate control. As a rule, when flow begins and if it produces turbulence in the airway before lung filling occurs, cut-off pressure is rapidly reached. Flow sensitivity, be it rotating valve or poppit, was designed to try to prevent this. The air clutch which is used in some equipment is also designed to do this. In trying to solve the problems of unlimited volume and pressure cycling, there are also problems in designing of equipment and in the actual functioning of equipment.

The proponents of pressure point out that the pressure increases the flow past obstructions and gets behind obstructions and increases delivery. This may be partially correct. If a respirator is being used on a patient, apneic or assisted, the individual will be noted to ventilate a fixed area of the most normal lung. When the normal lung is filled and depending on the equipment there may or may not be ventilation of obstructed or diseased areas of the lung. In most instances where any form of mechanical ventilation is used, ventilation is to the normal lung area and treatment even where medication is used must be delivered into the normal lung in the largest quantity following which, if time and equipment are allowed, there may be some delivery to diseased lungs. In generalized disease such as asthmatic bronchitis it should be realized that the lowest effective ventilatory pressure is by far the best. The greatest delivery pressure developed through these small and restricted tubes, particularly where the balloon area is turned into tubular areas, causes turbulence. Turbulent obstruction will cause recycling in any type of IPPB equipment used. In order to ventilate severely obstructed areas new techniques should be used if adequate ventilation is to actually occur in these areas of the lung. The obstructive technique is herein described. Watch the patient carefully and as soon as he has filled his normally ventilated lung area, then the machine must be held on so that pressure continues to rise thus causing flow into the diseased and obstructed areas. This is done every fourth to fifth breath. Pressure is held until it rises to 40 centimeters of water or for about 30 seconds. This does indeed produce a plateau effect after the lungs have been filled for a sufficient length of time to allow pressure to dilate the bronchus and to deliver around and through obstructed areas. This should be done every treatment and the therapist should watch closely. It is important that pressures do not reach 50 centimeters or greater. (Too high a pressure produces interstitial emphysema and/or lung rupture.) The patient's position in inhalation therapy is quite important. Where apical disease is being treated, the apical area should be the most ventilated with medication. This is

best done with the patient lying on his back at a slight 30° incline of the head and chest down. The dorsal segment of the lower lobe has better delivery with the patient lying on his back. The lingula on the left or middle lobe on the right are better ventilated with the patient leaning forward. The lower lobes are better ventilated with the patient sitting. The therapist should know the location of the patient's disease, and what he is trying to treat, in order to effect most adequate delivery to the diseased area.

The individual who is apneic and who must be ventilated can better be ventilated with an IPPB machine, particularly one with a positive and negative phase, than with any of the volume cycled machines on the market. This is true if the individual using the machine knows what he is doing. To ventilate the patient who is apneic, the plateau principle is probably the safest and most effective. If the IPPB machine is so set that it is reaching roughly the pressure needed to deliver the volume, (one which delivers so that breath sounds are good at the posterior bases) then pressure is correct for lung ventilation. The rate of ventilation should be slow and pressure so set that it rapidly rises to about four to five centimeters below peak cycling pressure which is usually 25 to 35 centimeters of water, and then slowly climbs from this point to peak pressure. The user is producing a plateau effect with a pressure-cycle respirator in which he can control the duration of the plateau. Since flow continues, instead of seeing the pressure needle fall, he sees the pressure needle slowly rise as the lungs are filled completely. Then, compression causes the respirator to cycle. If high pressures are needed, a slight negative expiratory phase is also required to compensate for the circulatory depression that occurs during the inspiratory period of plateau. With equipment that can be properly controlled (flow-rate-wise, pressure-wise, and negative-wise) as well as providing inspiratory periods separate from expiratory periods, then the individual can be ventilated adequately with a plateau effect that the operator controls. Where a properly executed plateau is produced, high pressures are not required. Low or moderate pressures with sufficient time for dilation and diffusion and flow to occur are what is needed. As a rule of thumb, the higher the pressure the poorer the delivery. Machines and technicians that insist on high pressures produce damage, not ventilation, even in the normal lung. The lungs become red and beefy and full of exudate produced by the technique. The patient should be monitored by blood gases. When this technique is used for the ventilation of the apneic patient, the biggest problem is to keep from over-ventilating and producing a respiratory alkalosis.

It is impossible in any presentation to cover all points. If it were, one work would cover completely. The presentation of the physics and physiology of inhalation therapy and common misconceptions in inhalation therapy was conceived because of the rapid development of this science. Most authors on the subject do not go back to basic physics and physiology. Success with half correct concepts has caused people to feel that this was the whole truth and so to praise their own methods and condemn those that were not better. If one goes back to the basic science from which inhalation therapy is developed and studies what has been presented here, then the laws of physics and chemistry and their applications can be understood. Half truths are arbitrarily changeable. They are more popular because of those who would rather be great than right. Anyone who has any arguments with what has been presented is invited to go back to the basic physics, chemistry, and physiology from which this series was derived. If one will study and think on this, it will bring him to the same conclusions as herein presented. Inhalation therapy at this day and time has not obtained the prominence it should. The reason is that the science must be great on its own merits; not for the purpose of making its proponents great.

Fathers and Sons in Medicine

The Brunsons Practice In Enterprise and Samson

The name of Brunson has been one to reckon with for 120 years of history in the Alabama Wiregrass, down in the southeastern section of the State.

And for half a century, one with an M. D. after his name has been practicing medicine in that area, first in Kinston, in Coffee County, and then in Samson, Geneva County. Emmett Treadwell Brunson, born in Brunson, Ala., in 1893, earned his M. D. degree at Emory 28 years later, thus qualifying for MASA's exclusive 50-year club when the association holds its annual session in Birmingham. He received his baccalaureate from the University of Alabama in 1917.

When Dr. Brunson began practice in Kinston he met, wooed and wed a lovely school teacher, Foye Thomas of Troy. Two children were born of the marriage, Barbara, the younger, who is today Mrs. Winfield Baird of Dothan, and Emmett Thomas Brunson, destined to follow his father into medicine.

The Doctors' Brunson

It is like-father-like-son in many respects for these two Emmett T. Brunsons. For one thing, he was graduated with his M. D. degree from Emory University and Emory School of Medicine, he interned and served a three-year residency in internal medicine at the University of Alabama Medical College, and again like his father, he returned to Coffee County to practice, with the Enterprise Medical Clinic.

For many years the senior Dr. Brunson served as chairman of the Board of Deacons in the First Baptist Church in Samson. Today the junior Dr. Brunson is a Deacon in the First Baptist Church of Enterprise, and sings in the choir.

In 1961, while serving his residency, he married a hometown girl, Jackie Jones, a graduate of Judson who was teaching in Montgomery at that time. The Brunson parents became grandparents with the birth of twin sons to the junior Brunsons. They are named Eric Thomas and Emmett Treadwell Brunson II, thus doubly perpetuating the initials of father and grandfather, E. T. B. And maybe—*quien sabe?*—they will perpetuate the medical tradition as well.

The junior Brunsons also have a daughter, Elizabeth Foye.

One way in which the junior Dr. Brunson cannot hope to compete with his father is in deliveries. He is an internist, while his father in half a century of general practice has presided over the birth of so many babies in southeast Alabama that he has long since lost count.

PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

sterile solution (300 mg. per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

and single-dose 2 ml.
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...

©1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 4900

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

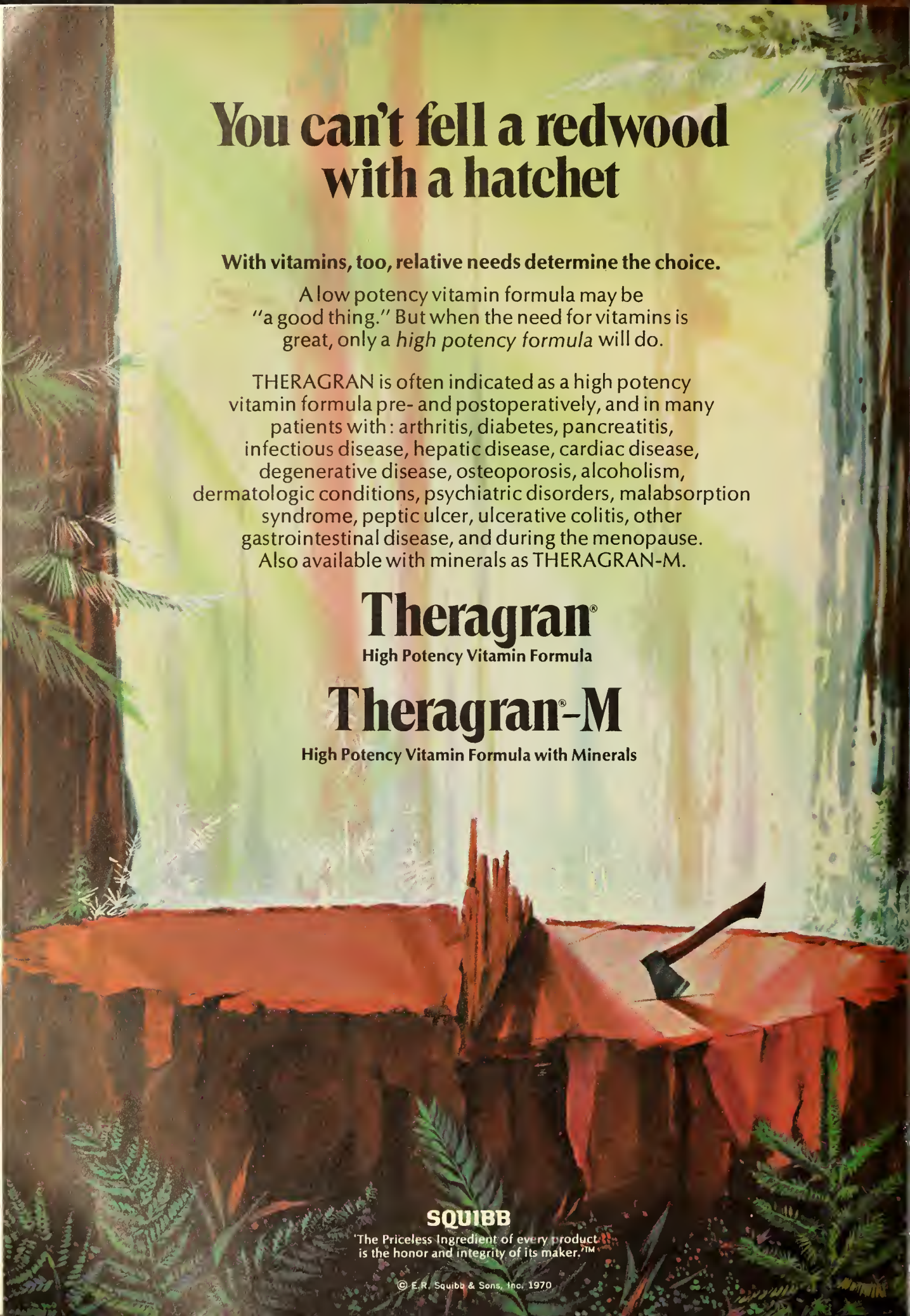
Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.


You can't fell a redwood with a hatchet
With vitamins, too, relative needs determine the choice.
A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a high potency formula will do.
THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.
Theragran®
High Potency Vitamin Formula
Theragran®-M
High Potency Vitamin Formula with Minerals
SQUIBB
"The Priceless Ingredient of every product is the honor and integrity of its maker."™
© E.R. Squibb & Sons, Inc. 1970

Program

of the

110th ANNUAL SESSION

of the

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

PARLIAMENT HOUSE MOTOR HOTEL—BIRMINGHAM

APRIL 15, 16, 17, 1971

The 110th Annual Session of the Medical Association of the State of Alabama will convene at 9 a. m., on Thursday, April 15, 1971, in the Sussex-Cambridge Rooms on the mezzanine floor of the Parliament House Motor Hotel, Birmingham, Alabama.

The opening session will be called to order by O. Emfinger, M. D., President of the Association. It will be followed immediately by the Orientation Program for new members with Archie E. Thomas, M. D., President-Elect, presiding.

Three scientific sessions will be held, also in the Sussex-Cambridge Rooms, featuring outstanding speakers.

Registration

The registration desk for Counsellors, Delegates and members of the Association will be located in the lobby of the Parliament House Motor Hotel.

The desk will be open from 8:00 a. m. until 5:00 p. m., on Thursday and Friday, April 15 and 16, and from 7:30 a. m. until 10:30 a. m., on Saturday, April 17.

Counsellors and Delegates will be registered in advance and may claim their badges, a copy of the official program and any other material upon which they will be called to make decisions upon signing the official registration card.

Members and guests will be registered at the same times and places upon signing registration cards.

Exhibitors Registration

A registration desk for exhibitors will be located on the mezzanine floor of the Parliament House Motor Hotel adjacent to the exhibit area from 2:00 p. m. until 5:00 p. m., on Wednesday, April 14. Thereafter, exhibitors may register at the main registration desk.

Badges

No person will be admitted to any scientific, business, or social session of the Association, or to the exhibit area, unless wearing an official badge.

Speakers

Speakers will be called in the order in which they appear on the program. Should a speaker be absent when called, his paper will be passed and called again upon conclusion of the program.

(Continued on Page 658)

His makeup is unique by tradition.

His ulcer treatment is unique by tradition, too.

In the world of entertainment, a clown's makeup remains the exclusive property of its originator. Time has established that tradition. In the treatment of ulcers and other gastrointestinal complaints, time has established Pro-Banthine as a tradition too.

Few drugs can boast a longer successful run. Introduced 17 years ago, this drug is a veteran gastrointestinal performer.

Pro-Banthine stars in the treatment of peptic ulcer, functional gastrointestinal disturbances, ulcerative colitis, hypertrophic gastritis, pylorospasm, acute and chronic pancreatitis, diverticulitis, biliary dyskinesia, hyperhidrosis, ileostomies, and colonic, ureteral or urinary bladder spasm. Its fame as an anticholinergic is worldwide.

When you want a performer you can count on . . . remember Pro-Banthine. Tradition does.

SEARLE Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

Pro·Banthine®
(propantheline bromide)

the traditional ulcer treatment

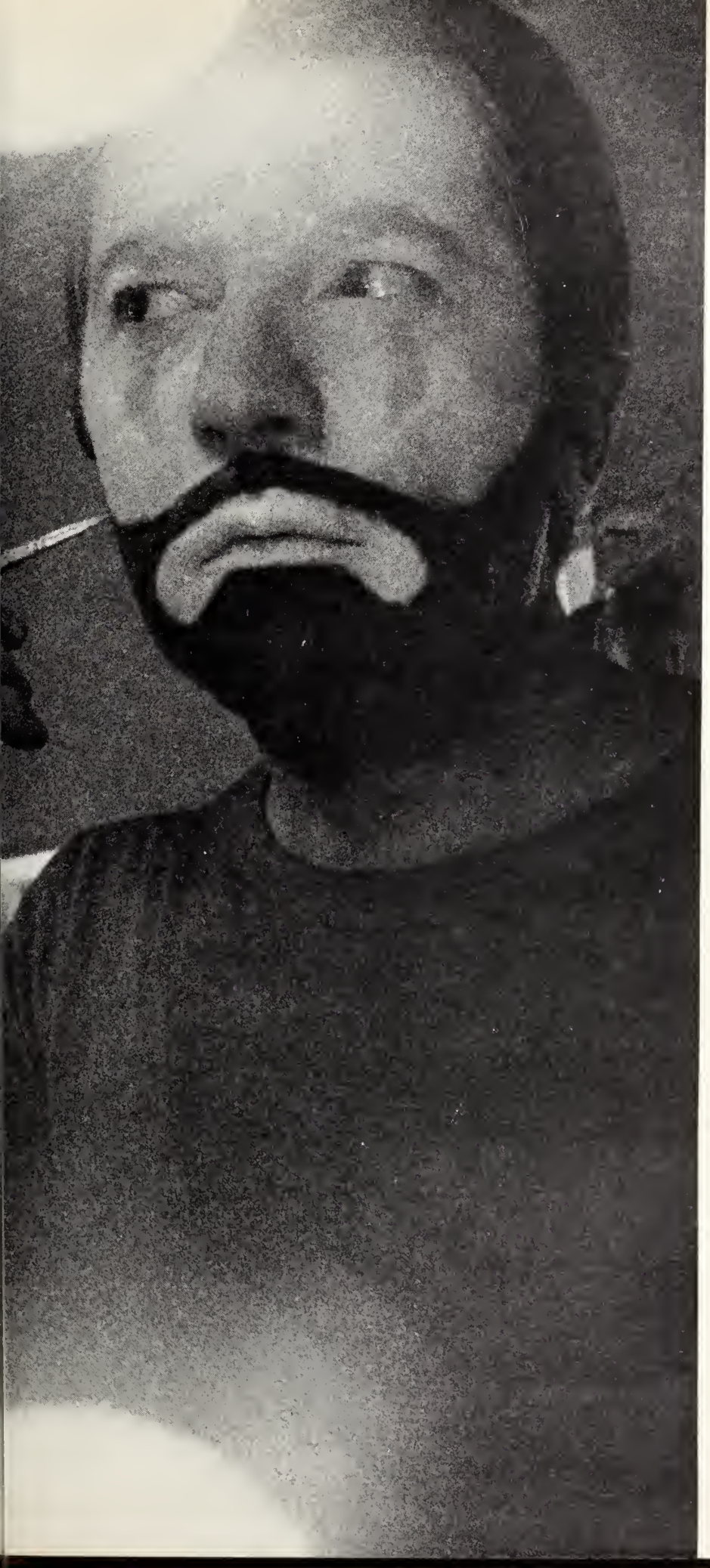
Pro-Banthine 15 mg. propantheline bromide

Pro-Banthine 15 mg. propantheline bromide with Dartal 5 mg. thiopropazate dihydrochloride

Pro-Banthine 15 mg. propantheline bromide with Phenobarbital 15 mg. warning: may be habit forming

Pro-Banthine P.A. 30 mg. propantheline bromide in time-release form

Pro-Banthine 7½ mg. propantheline bromide Half Strength



Pro·Banthine®
(propantheline bromide)

Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

Contraindications. Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage. The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Dartal® 5 mg.
(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.

Contraindications: Glaucoma, severe cardiac disease.

Warnings: Pro-Banthine with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

Adult Dosage: One tablet three times a day.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Phenobarbital 15 mg.
Warning: May be habit-forming.

For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthine P.A.®
prolonged acting brand of propantheline bromide

For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthine.

Dosage Form. Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

Dosage: The recommended initial dosage is one tablet in the morning and one at night.

084

SEARLE

Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

(Continued from Page 655)

Hotel Reservations

The Central Office of the Medical Association of the State of Alabama has established a Housing Bureau for the convenience of Counsellors, Delegates and members.

Advance registration requests are included in the March and April issues of The Journal.

The headquarters hotel will be the Parliament House Motor Hotel. Priority for the limited number of rooms available has been assigned to Counsellors, Delegates, officers of the Association and guest speakers. When the supply of rooms is exhausted, applicants will be referred to the Red Carpet Inn, Travelodge Motor Hotel, both within a few minutes driving distance of the Parliament House and to the Tutwiler Hotel in downtown Birmingham, and also the Holiday Inn Downtown and Holiday Inn Civic Center.

Deadline for advance registration is April 5, 1971. After that date, reservations must be made directly with the hotel or motel.

Social Events

A full listing of social events of the 110th Annual Session will be published in the official program, available at the time of registration. Scientific presentations of medical specialty groups will be scheduled either before or after the Annual Session in conformance with the Constitution and Ordinances which forbid this type of meeting during the three days allotted to the Annual Session. Social events for specialty groups and alumni organizations will be held at places and times to be announced in the official program.

Tickets for social events should be purchased in advance if possible. Otherwise, a limited number will be available at the registration desk.

Auxiliary Luncheon

The Woman's Auxiliary to the Medical Association of the State of Alabama will hold a luncheon on Thursday, April 15, at 12:30 P. M. in the Crown Room of the Parliament House Motor Hotel, honoring Mrs. R. C. L. Robertson, President, Woman's Auxiliary to the American Medical Association; Mrs. J. Ramsey Moore, President, Woman's Auxiliary to the Southern Medical Association and Mrs. Howard C. Johnson, President, Woman's Auxiliary to the Medical Association of the State of Alabama.

Presentation of the annual AMA-ERF Contribution to Clifton K. Meador, M. D., Dean, University of Alabama School of Medicine will be made by Mrs. Ben Johnson, Jr., AMA-ERF Chairman.

The principal speaker will be Mr. Mark Russell, "Political Satirist," of Shoreham Hotel, Washington, D. C.

Jefferson County Medical Society Dinner

The Jefferson County Medical Society will be host at a dinner-dance on Thursday, April 15, at 6:00 p. m., at the Birmingham Municipal Auditorium Exhibition Hall. A reception immediately preceding the dinner will be hosted by the Birmingham Exchange Security Bank.

ALAPAC Luncheon

The annual ALAPAC Luncheon will be held in the Crown Room of the Parliament House Motor Hotel at 12:30 P. M., on Friday, April 16, with Mr. James W. Foristel, Director of AMA Congressional Relations Department, Washington, D. C., as principal speaker. Consult the official program for additional information.

Awards Dinner

The Awards Dinner will be held in the Crown Room of the Parliament House Motor Hotel at 7:00 p. m. on Friday, April 16. The dinner will be sponsored by the Committee on Public Relations in honor of the winners of the 1971 awards, past presidents and members of the Fifty Year Club. The following

(Continued on Page 661)

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

(Continued from Page 658)

new members will be inducted into the Fifty Year Club:

Wyatt Heflin Blake, Jr., M. D.
Emmett Treadwell Brunson, M. D.
Melson Barfield Carter, M. D.
Robert Bernard Garlington, M. D.
Hughes Kennedy, Jr., M. D.
Ralph Lewis Lawrence, M. D.
Charles Franklin Lewis, M. D.
Wilmot Shipp Littlejohn, M. D.
James Loveless Seibold, M. D.

Awards will be presented by E. W. Stevenson, M. D., Chairman of the Committee on Public Relations, to the following:

William H. Sanders Award to the person, lay or professional, engaged full time in public health work for services above and beyond the call of duty: Mr. William Talmadge Garrison, R. S., Huntsville.

Douglas L. Cannon Medical Reporter Awards to the reporters, editors or publishers, of an Alabama newspaper, or to radio television personalities who have shown excellence in factual reporting of medical news and for outstanding efforts in elevating medical news coverage: Mr. Dave Williams, WJOI Radio, Florence; Mrs. Sylvia Hart, Mobile Press Register, Mobile.

The A. H. Robins Community Service Award for the physician who has rendered outstanding service to his community above and beyond his professional call of duty: Grover C. Murchison, M. D., Montgomery.

Buris R. Boshell, M. D., the University of Alabama School of Medicine, will present the William Crawford Gorgas Award to the citizen of Alabama who is not actively engaged full time in the field of health and who has rendered outstanding service to Mrs. Ruth Lawson Hanson, Birmingham.

The principal speaker will be the Honorable Howell T. Heflin, Chief Justice, Alabama Supreme Court.

Other Events

Exhibitors Reception

The annual reception for representatives of exhibitors at the 110th Annual Session will be held from 4:00 p. m. to 5:00 p. m., on Wednesday, April 14, in the Sussex Room of the Parliament House Motor Hotel. Officers and members of the Board of Censors and Board of Trustees will be hosts at this reception.

Alabama Orthopaedic Society

The Alabama Orthopaedic Society will have a meeting at the Guest House Motel. Registration and coffee from 9 a. m. to 10 a. m. The first scientific program will begin at 10 a. m. Lunch will be at 1 p. m. The second scientific program will be held from 2 p. m. to 5 p. m. A reception is scheduled at 7 p. m., and dinner at 8 p. m.

Alabama Thoracic Society

The Alabama Thoracic Society will sponsor a reception at 6:30 P. M. and dinner at 7:15 P. M., on April 14 in the Windsor Room, Parliament House Motor Hotel.

Speaker at the dinner will be Dr. John S. Chapman, Professor of Medicine, University of Texas, Southwest, Dallas, Texas.

Alabama Academy of Neurology and Psychiatry and Alabama District Branch of the American Psychiatric Association

A joint meeting of the Alabama Academy of Neurology and Psychiatry with the Alabama District Branch of the American Psychiatric Association will be held on April 14 at 6:00 p. m. at the Kings Inn, Birmingham.

Guest Speaker will be W. Stewart Agras, M. D., Professor and Chairman of the Department of Psychiatry, University of Mississippi Medical Center, Jackson, Mississippi. Dr. Agras will speak on "Some Variables Involved in the Modification of Neurotic Behavior."

Alabama Academy of Ophthalmology and Otolaryngology and the Birmingham Eye, Ear, Nose and Throat Society

A joint meeting of the Alabama Academy

(Continued on Page 664)

2
3
4
5
6

the night shift of depression... insomnia

epression is a 24-hour-a-day problem. And insomnia is ften its nocturnal expression. In fact, insomnia may be a ey symptom in establishing the diagnosis of depression.

LAVIL HCl (Amitriptyline HCl, MSD) may prove quite elpful when you have arrived at such a diagnosis. Unlike sychic energizers or agents that merely elevate mood, LAVIL HCl embodies a mild antianxiety action which anifests itself even before the fundamental antidepressant ctivity of the drug becomes evident. Daytime drowsiness ccurs in some patients, usually within the first few ays of therapy.

OTE: Not recommended during the acute recovery phase llowing myocardial infarction. Patients with cardiovascular isorders should be watched closely; arrhythmias, sinus achycardia, and prolongation of the conduction time have een reported, particularly with high doses; myocardial farction and stroke have been reported with drugs of this lass. Close supervision is required for hyperthyroid atients or those receiving thyroid medication. Concurrent ectroshock therapy may increase the hazards of therapy; uch treatment should be limited to patients for whom it is ssential. Discontinue the drug several days before elective urgery if possible.

---

ntraindications: Known hypersensitivity. Should not be given ncomitantly with or within at least 14 days following the discontinuance a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl utiously with gradual increase in dosage until optimum response is hieved. Not recommended during the acute recovery phase following yocardial infarction or for patients under 12 years of age.

arnings: May block the antihypertensive action of guanethidine or similarly ting compounds. Should be used with caution in patients with a history of izures or urinary retention, or with narrow-angle glaucoma or increased traocular pressure. Patients with cardiovascular disorders should be atched closely; arrhythmias, sinus tachycardia, and prolongation of the nduction time have been reported, particularly with high doses; yocardial infarction and stroke have been reported with drugs of this ass. Close supervision is required for hyperthyroid patients or those ceiving thyroid medication. May impair mental and/or physical abilities quired for performance of hazardous tasks, such as operating machinery driving a motor vehicle. Safe use during pregnancy and lactation has not en established; in pregnant patients, nursing mothers, or women who may come pregnant, weigh possible benefits against possible hazards to other and child.

ecautions: When used to treat the depressive component of schizophrenia, ychotic symptoms may be aggravated; in manic-depressive psychosis, pressed patients may experience a shift toward the manic phase, and ranoid delusions, with or without associated hostility, may be aggerated; in any of these circumstances, it may be advisable to reduce e dose of amitriptyline HCl, or to use a major tranquilizing drug, such as rphenazine, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.

How Supplied: Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

when the diagnosis is depression

ELAVIL® HCl
(AMITRIPTYLINE HCl | MSD)

MSD MERCK SHARP & DOHME

(Continued from Page 661)

of Ophthalmology and Otolaryngology and the Birmingham Eye, Ear, Nose and Throat Society will begin with a reception at 6:30 p. m., April 14 at "The Club." Dinner will be at 7:30 p. m. Lt. Gov. Jere Beasley will be the featured speaker for the meeting.

Preceding the social functions, there will be a meeting of the Academy's Executive Committee at 5:30 p. m.

APRIL 15

Alabama Division, International College of Surgeons

The Alabama Division, International College of Surgeons, will hold a breakfast meeting at the Parliament House Thursday, April 15 at 7:30 a. m.

APRIL 17

Alabama Radiological Society

The Alabama Radiological Society will sponsor a luncheon on Saturday, April 17, at the Parliament House Motor Hotel. Luncheon speaker will be Dr. Charles M. Nice, Jr., M. D., Professor and Chairman, Department of Radiology, Tulane University School of Medicine, New Orleans, Louisiana.

Hosts Of The Association

Official hosts of the Association will be the Jefferson County Medical Society, Walter F. Scott, Jr., M. D., President. A Host Committee will be assigned to provide transportation and escort for visiting dignitaries.

Board of Trustees

The Board of Trustees will meet at 9:00 a. m., on Wednesday, April 14, in Room 203 of the Parliament House Motor Hotel, to hear discussions on any and all matters of business to be presented at the 110th Annual Session. All Counsellors, Delegates and members of the Association are cordially invited to sit with the Board of Trustees and to present their views on matters under consideration.

Board of Censors

The Board of Censors will meet at 9:00 a. m., on Wednesday, April 14, in Room 202 of the Parliament House Motor Hotel to transact official business concerning the State Board of Medical Examiners and the State Committee on Public Health. Upon completion of discussions relating to the Board of Medical Examiners and the Committee on Public Health, the Board of Censors will convene to officially consider Association affairs, including matters referred by the Board of Trustees.

Alumni Meetings

Tulane Alumni Reception will be held Thursday, April 15, at 6:00 P. M., in Room 203 of the Parliament House Motor Hotel.

Vanderbilt Alumni Reception will be held Friday, April 16, at 6:00 P. M., in Room 203 of the Parliament House Motor Hotel.

University of Alabama annual business meeting will be held on Friday, April 16, at 6:00 P. M., in the Annex of the Parliament House Motor Hotel.

PROGRAM

Opening Session

Thursday, April 15, 1971

Cambridge-Sussex Rooms

Parliament House Motor Hotel

O. Emfinger, M. D., Union Springs

President, Presiding

9:00 A. M.

Call to Order

(Cnotinued on Page 667)

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilomide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfanamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

TRADEMARK. AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

(Continued from Page 664)

Invocation

The Right Reverend Furman C. Stough, Bishop, Episcopal Diocese of Alabama

9:05 A. M.

Welcome Address

Honorable George C. Seibels, Mayor, City of Birmingham

9:10 A. M.

Welcome Address

Walter F. Scott, Jr., M. D., President, Jefferson County Medical Society

Orientation

Parliament House Motor Hotel

Archie E. Thomas, M. D., Montgomery, President-Elect, Presiding

9:15-9:40 A. M.

Medical Ethics

F. M. Phillippi, Jr., M. D., Brewton, Vice President, Southwestern Division

9:40-10:05 A. M.

Why You Should Become A Part of Organized Medicine

James E. Cameron, M. D., Alexander City, Vice President, Northeastern Division

10:05-10:30 A. M.

Insurance Forms and Fee Schedules

Wood S. Herren, M. D., Birmingham, Vice President, Northwestern Division

10:30-10:45 A. M.

COFFEE BREAK—VIEW EXHIBITS

10:45-11:15 A.M.

How To Avoid A Malpractice Suit

Thomas B. Hill, LL. B., Montgomery, Hill, Hill, Stovall, Carter & Franco

11:15-11:45 A. M.

PRESIDENT'S MESSAGE

O. Emfinger, M. D., Union Springs

Auxiliary Luncheon

Thursday, April 15, 1971

Crown Room

Parliament House Motor Hotel

12:30 P. M.

Mrs. Howard C. Johnson, Sheffield, President, Presiding

Invocation

Mrs. Clyde Terrell, Bessemer

Introduction of Guests

Mrs. Howard Johnson, President

Presentation of AMA-ERF Contribution

To Clifton K. Meador, M. D., Dean, University of Alabama School of Medicine by Mrs. Ben Johnson, Jr., AMA-ERF Chairman

(Continued on Page 670)

They all have two things in common: they have monilial vaginitis;

CANDEPTIN now gives you complete therapeutic flexibility.
It is the specific high potency antimonilial agent which provides superior effectiveness. And there is at least one dosage form to meet every patient's individual needs and/or preference.

CANDEPTIN – more advantages for your patients...
It's fast–prompt symptomatic relief of itching, burning, candidiasis discharge and malodor in 48-72 hours; usually cures completely in a single 14-day course of therapy.

It's safe–no side effects, clinical reports of irritation or sensitization have been extremely rare; exact dosage can be assured.[5,6]

It's convenient–easy to use in all forms, encourages patient acceptance and cooperation; therapy can be started in your office.

It's clinically proven–Candicidin is significantly more potent in vitro than nystatin,[1] and has a record of cure rates of 90% and more in pregnant and non-pregnant patients.[2,3,4] In two recent studies, both involving gravid and non-gravid patients, a 100% culture-confirmed cure rate was achieved with 14 days of therapy.[5,6]

CANDEPTIN (candicidin) Vaginal Tablets, Vaginal Ointment, and . . . new VAGELETTES™
Now Vagelettes offer a unique new dosage form–candicidin ointment in a soft gelatin capsule – for virtually unlimited application. With Candeptin in three forms, your range of therapy has been extended to meet even those previously difficult-to-treat Candida cases.

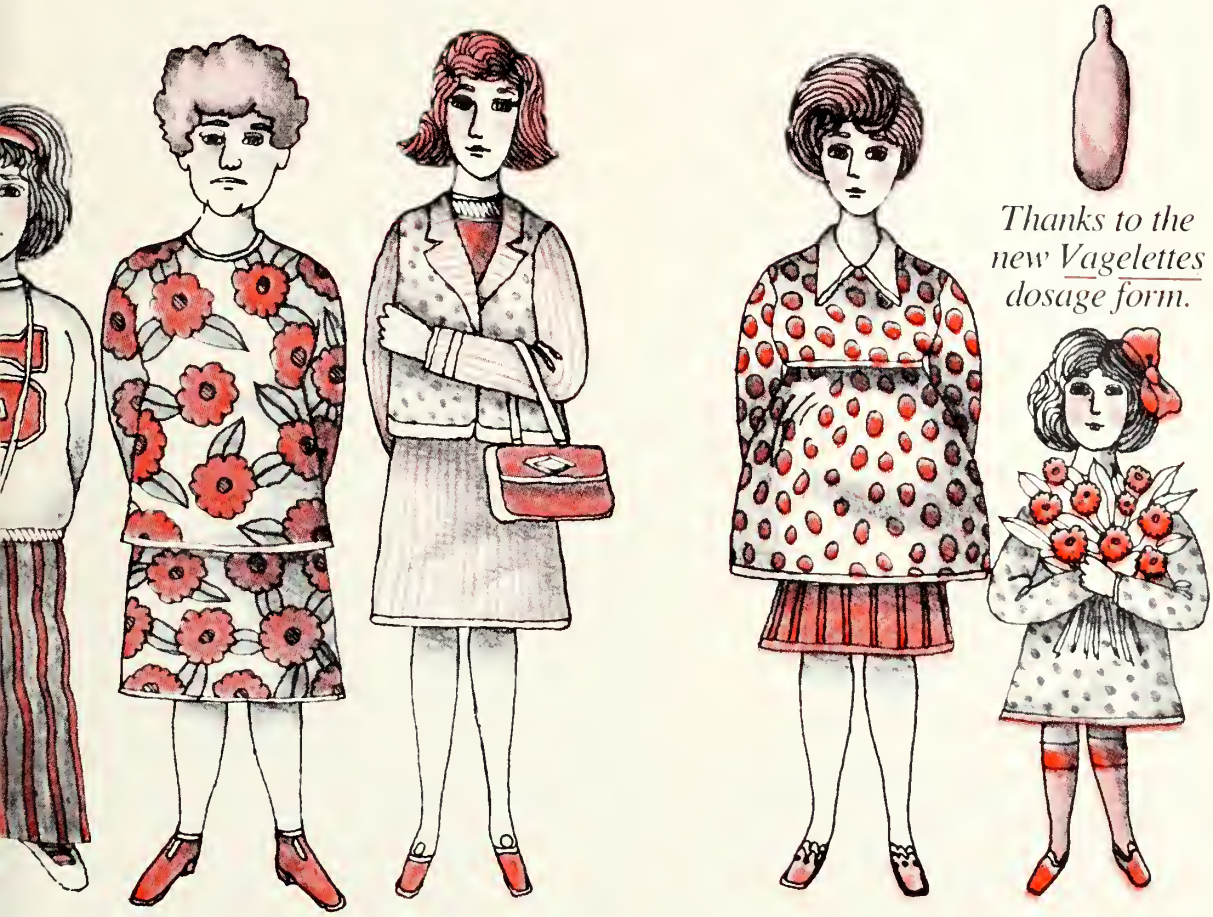
☐ For the young patient–cut off the tip of the narrow soft end of the Candeptin Vagelette and extrude contents through the intact hymen.

☐ For the gravid patient–easy manual insertion without the need for an applicator or inserter for intravaginal use.

☐ For the multiple needs of all your patients–topical application for labial involvement, intravaginal use to treat mucosal infestation.

References: 1. Lechevalier, H.: Antibiotics Annual 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. 2. Olsen, J.R.: Journal-Lancet *85*:287 (July) 1965. 3. Giorlando, S.W., Torres, J.F., and Muscillo, G.: Am. J. Obst. & Gynec. *90*:370 (Oct. 1) 1964. 4. Friedel, H.J.: Maryland M.J., *15*:36 (Feb.) 1966. 5. Giorlando, S.W.: to be published 1971. 6. Decker, A.: Case Reports on File, Medical Department, Julius Schmid.

y can now be cured with Candeptin. Even these two.



DEPTIN®
icidin Vaginal Tablets, Ointment, VAGELETTES™

iption: Candeptin (candicidin) Vaginal Ointment contains ersion of candicidin powder equivalent to 0.6 mg. per gm. 6% Candicidin activity in U.S.P. petrolatum. 3 mg. of Can- n is contained in 5 gm. of ointment or one applicatorful. eptin Vaginal Tablets contain Candicidin powder equiva- o 3 mg. (0.3%) Candicidin activity dispersed in starch, e and magnesium stearate. Candeptin Vagelettes contain 3 f Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.

n: Candeptin Vaginal Ointment, Vaginal Tablets and Vagel- possess anti-monilial activity.

ations: Vaginitis due to *Candida albicans* and other candida s.

aindications: Contraindicated for patients known to be ive to any of its components. During pregnancy manual t or Vagelette insertion may be preferred since the use of ntment applicator or tablet inserter may be contraindicated.

on: During treatment it is recommended that the patient re- from sexual intercourse or the husband wear a condom to re-infection.

se Reaction: Clinical reports of sensitization or temporary ion with Candeptin Vaginal Ointment, Vaginal Tablets or ettes have been extremely rare.

ge: One vaginal applicatorful of Candeptin Ointment or aginal Tablet or one Vagelette is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Available Dosage Forms: Candeptin Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). Candeptin Vaginal Tablets are packaged in boxes of 28, in foil with inserter — enough for a full course of treatment. Candeptin Vagelettes are packaged in boxes of 14. (14-day regimen requires 2 boxes).
Store under refrigeration to insure full potency.
Federal law prohibits dispensing without prescription.

Candeptin®
(candicidin) Vaginal Tablets/Ointment, VAGELETTES™ Vaginal Capsules
depend on it as your agent of first choice

Innovators in Candicidin Therapy
Julius Schmid Pharmaceuticals
423 West 55th Street
New York, New York 10019

(Continued from Page 667)

Speaker

Mr. Mark Russell, "Political Satirist," Shoreham Hotel, Washington, D. C.

Address Of AMA President

Thursday, April 15, 1971

Cambridge-Sussex Rooms

Parliament House Motor Hotel

O. Emfinger, M. D., Union Springs
President, Presiding

Introduction of Speaker

E. Bryce Robinson, Jr., M. D., Fairfield, Chairman, Alabama AMA Delegation

2:00-2:40 P. M.

Medical Education and Health Care Delivery in the Future

Walter C. Bornemeier, M. D., President, American Medical Association, Chicago, Illinois

First Scientific Session

Wood S. Herren, M. D., Birmingham
Vice President, Presiding

2:40-3:10 P. M.

The Word Catheter

Julian P. Hardy, M. D., Department of Obstetrics and Gynecology, Lloyd Noland Hospital and Clinic, Fairfield, Alabama

3:10-3:55 P. M.

Tuberculosis And The Nature Of The Tubercle As A Tissue Reaction

John S. Chapman, M. D., Assistant Dean for Postgraduate Education, Professor of Medicine, University of Texas, Southwestern Medical School, Dallas, Texas

(Continued on Page 672)

Brief Summary of Prescribing Information– 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

(Continued from Page 670)

3:55-4:15 P. M.

COFFEE BREAK—VIEW EXHIBITS

4:15-4:55 P. M.

Surgery In Rheumatoid Arthritis

Chestley L. Yelton, M. D., Chairman and Professor, Department of Orthopedic Surgery, University of Alabama School of Medicine, Birmingham, Alabama

4:55-5:35 P. M.

Endocrinology Of Sexual Behavior

Robert B. Greenblatt, M. D., Professor and Chairman, Department of Endocrinology, Medical College of Georgia, Augusta, Georgia

Second Scientific Session

Friday, April 16, 1971

Cambridge-Sussex Rooms

James E. Cameron, M. D., Alexander City Vice President, Presiding

9:00-9:30 A. M.

Ruptured Abdominal Aneurysms

Merrill N. Bradley, M. D., Clinical Associate Professor of Surgery, University of Alabama School of Medicine, Birmingham, Alabama

9:30-10:10 A. M.

Early Experience With Coronary Artery Reconstruction

Thomas A. S. Wilson, M. D., Assistant Clinical Professor of Surgery, University of Alabama School of Medicine, Birmingham, Alabama

10:10-10:30 A. M.

Somatic Treatment In Psychiatry

Ferris N. Pitts, Jr., M. D., Associate Professor of Psychiatry, Washington University School of Medicine, St. Louis, Missouri

10:30-10:50 A. M.

COFFEE BREAK—VIEW EXHIBITS

10:50-11:40 A. M.

Jerome Cochran Lecture

Health Care In The Seventies—Illusions And Realities

Luther L. Terry, M. D., Vice President for Medical Affairs, University of Pennsylvania, Philadelphia, Pennsylvania

11:45 A. M.

Caucus Of Counsellors And Delegates

ALAPAC LUNCHEON

Friday, April 16, 1971

Crown Room

Parliament House Motor Hotel

12:30 P. M.

Grover C. Murchison, Jr., M. D., Montgomery, Chairman, ALAPAC, Presiding

Invocation

A. Ben Oliver, Ph. D., LL. D., LITT. D., Interim Pastor of the First Baptist Church of Birmingham

Introduction of ALAPAC Board of Directors and Other Notables at Speakers Table

Award of Plaque of Appreciation to State Senator Roland Cooper As a Proved Friend of Medicine

by John M. Chenault, M. D.
Chairman, Board of Censors

AMPAC and ALAPAC, An Effective Union

A 5-Minute talk, Hoyt D. Gardner, M. D., F. A. C. S. Chairman, AMPAC Board of Directors

Introduction of Speaker

O. Emfinger, M. D., President

Medicine and the United States Congress

James W. Foristel, LL.B., Director, AMA Congressional Relations Department, Washington, D. C.

Adjourn

Third Scientific Session

Friday, April 16, 1971

Cambridge-Sussex Rooms

F. M. Phillippi, Jr., M. D., Brewton
Vice President, Presiding

2:00-2:45 P. M.

Statewide Network Of Mental Health Services

Stonewall Stickney, M. D., Commissioner, Alabama State Department of Mental Health, Montgomery, Alabama

2:45-3:30 P. M.

The Roentgenology Of Collagen Diseases

Charles M. Nice, Jr., M. D., Professor and Chairman, Department of Radiology, Tulane University School of Medicine, New Orleans, Louisiana

3:30-3:50 P. M.

COFFEE BREAK—VIEW EXHIBITS

3:50-4:35 P. M.

Biomolecular Confirmation and Biological Activity

Dan W. Urry, Ph. D., Director, Division of Molecular Biophysics, Professor of Biochemistry, University of Alabama in Birmingham

4:35-5:05 P. M.

Bronchodilator Aerosol Therapy In The Management of Chronic Obstructive Pulmonary Disease

A. David Russakoff, M. D., Clinical Assistant Professor of Medicine, University of Alabama School of Medicine, Birmingham, Alabama

Awards Dinner

Friday, April 16, 1971

7:00 P. M.

Crown Room

Parliament House Motor Hotel

Presiding E. W. Stevenson, M. D., Chairman, Committee on Public Relations, Birmingham

Invocation

Reverend Joe Boone Abbott, Chaplain, Baptist Medical Center in Birmingham

Awards Presentations

E. W. Stevenson, M. D.

William Crawford Gorgas Award

(Presented by Buris R. Boshell, M. D.)

Mrs. Ruth Lawson Hanson

William Henry Sanders Award

Mr. William Talmadge Garrison, R. S.

Douglas L. Cannon Medical Reporter Award

Mrs. Sylvia Hart
Mobile Press Register
Mobile, Alabama

Mr. Dave Williams
WJOI Radio
Florence, Alabama

A. H. Robins Community Service Award

Grover C. Murchison, Jr., M. D.
Montgomery, Alabama

Introduction of Distinguished Guests, Fraternal Delegates and Presentation of S. Buford Word Award to Mrs. Edward Lee Trammell, Scottsboro

O. Emfinger, M. D., President,
Medical Association of the State of Alabama

Presentation of Fifty Year Club Members

Wyatt Heflin Blake, Jr., M. D.

Emmett Treadwell Brunson, M. D.

Melson Barfield Carter, M. D.

Robert Bernard Garlington, M. D.

Hughes Kennedy, Jr., M. D.

Ralph Lewis Lawrence, M. D.

Charles Franklin Lewis, M. D.

Wilmot Shipp Littlejohn, M. D.

James Loveless Seibold, M. D.

Introduction of Past Presidents

C. Kermit Pitt, M. D.

E. L. McCafferty, Jr., M. D.

E. Bryce Robinson, Jr., M. D.

J. O. Finney, M. D.

James G. Donald, M. D.

E. B. Glenn, M. D.

James G. Daves, M. D.

M. Vaun Adams, M. D.

John W. Simpson, M. D.

Hugh E. Gray, M. D.

Edgar G. Givhan, Jr., M. D.

John A. Martin, M. D.

Grady O. Segrest, M. D.

J. Orville Morgan, M. D.

B. W. McNease, M. D.

T. Brannon Hubbard, M. D.

Joseph M. Weldon, M. D.

Frank C. Wilson, M. D.

John Paul Jones, M. D.

Jesse P. Chapman, M. D.

James R. Garber, M. D.

J. D. Heacock, M. D.

Address

The Honorable Howell T. Heflin,
Chief Justice, Supreme Court of Alabama,
Montgomery

(The Association gratefully acknowledges the financial contributions made by Blue Cross-Blue Shield of Alabama, Inc.; Geigy Pharmaceuticals; and G. D. Searle Company.)

(Continued on Page 677)

When Preventing Constipation is a Concern . . .

Consider

SURFAK®

dioctyl calcium sulfosuccinate

(stool softener)

Surfak prevents constipation:

- **naturally**
  - . . . without bowel distention
  - . . . without adding sodium to the system
  - . . . without requiring unusual intake of water
- **conveniently**—one 240 mg. capsule per day
- **economically**—costs less per effective daily dose*

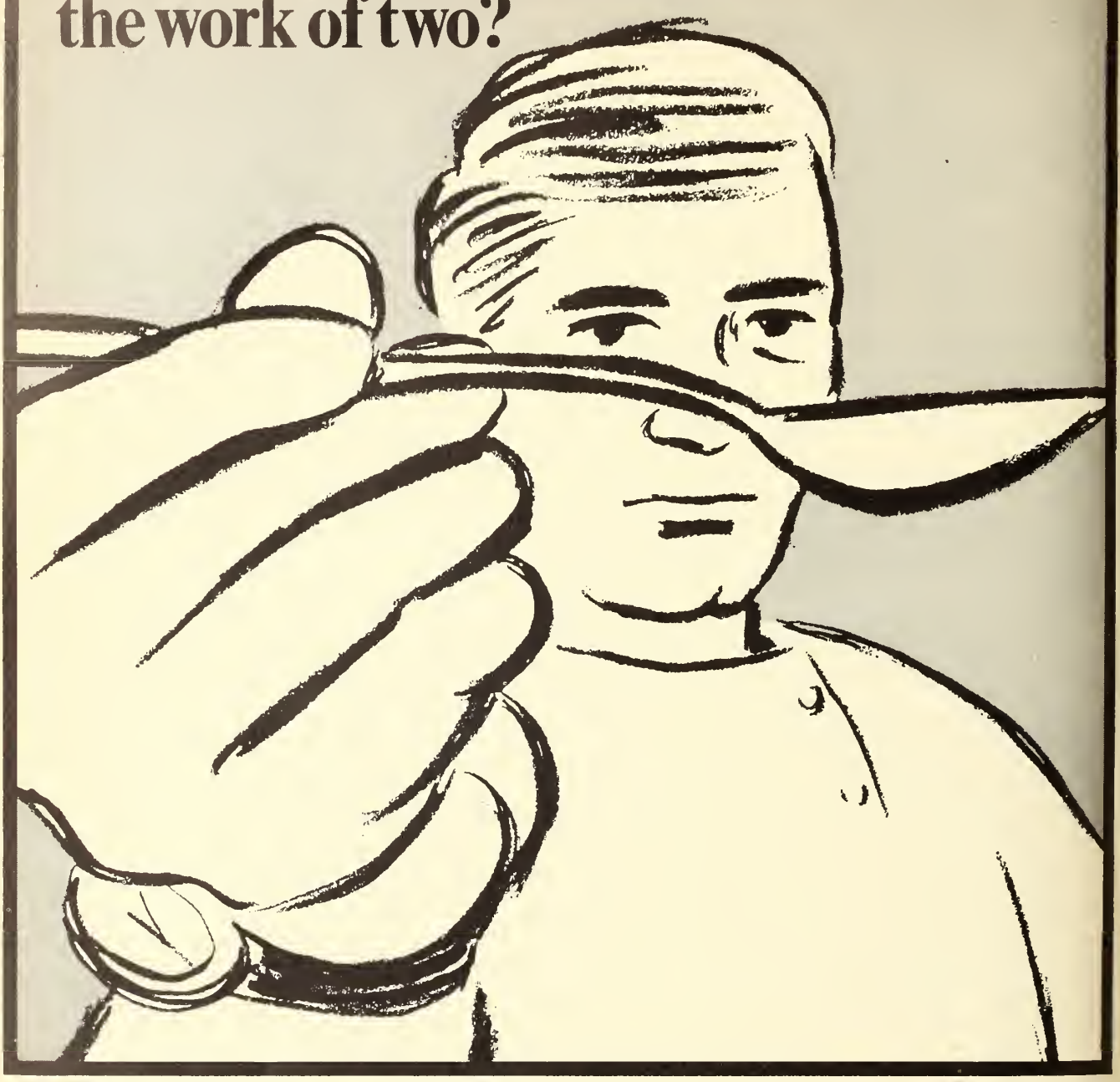
Supplied: Bottles of 15, 100 (FSN 6505-926-8844) and 1000 (FSN 6505-890-1627) and Unit Dose 100's (10 x 10 strips).

*based on actual drug store survey of prescribed dosages

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-167

Can one prescription do the work of two?



Yes, Kolantyl.®

Kolantyl Gel/Wafers contain
aluminum hydroxide/magnesium hydroxide, and
Bentyl® (dicyclomine hydrochloride) too.

Merrell
The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

0-2572 121721

(Continued from Page 674)

Annual Business Session

Saturday, April 17, 1971

Crown Room

Parliament House Motor Hotel

O. Emfinger, M. D., Union Springs,
President, Presiding

9:00 A. M.

Presentation by The Woman's Auxiliary to The Medical Association of the State of Alabama

Mrs. Howard Johnson, Sheffield,
Immediate Past-President

(1) Report of The Board of Censors

(2) Revision of the Rolls

(a) County Societies;

(b) Counsellors;

(c) Correspondents

(3) Election and Installation of Officers

(4) Presentation of Past President's Plaque

ADJOURNMENT

Animals Put Man To Shame

Forty-five years ago a book-club selection titled "Instinct and Intelligence" explored the behavior patterns of insects, particularly noting how they overcame unexpected obstacles. It was a fascinating work.

And now comes another completely absorbing book titled "The Friendly Beast," by Vitus B. Droscher, translated from the German and just published by E. P. Dutton of New York, stunningly illustrated with photographs, drawings and diagrams, a 300-page book priced at $8.95.

Divided into nine parts, composing 31 chapters, the book tells its story under such intriguing titles as "Arrested Human Beings," "The Road to Speech," "Population Policy in Animal Societies," "Statesmanship Among Wild Animals," "The Attraction of Evil," "The Three Pillars of Intelligence," and "The Dawn of Man."

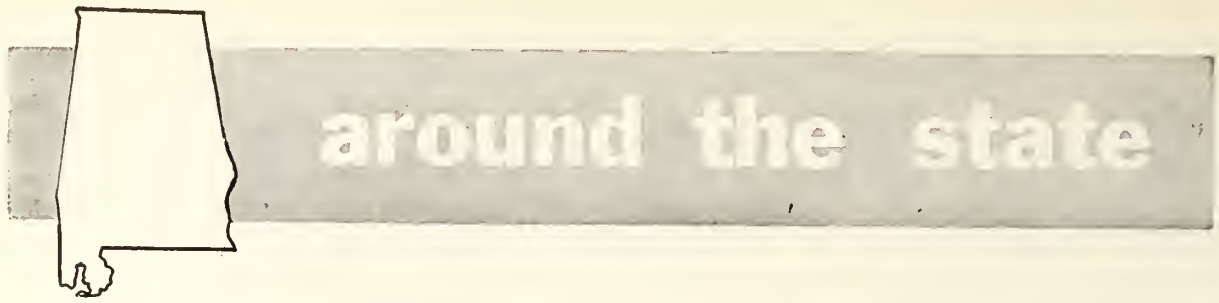
In it you will find that chimpanzees fight with clubs, that some animals go into mourning, that there are intellectuals of the sea, that birds call one another by name, that there are four-legged liars, that some animals are more democratic than men, that they have hunting laws, that they commit suicide, and that mercy killings are not unknown to elephants. Mating practices are distinctive. And there is photographic proof of it all. Anyone should like it.—M.

Ec-
on-
omy!

Dicarbosil®
ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102



Vital Statistics

NEW MEMBERS

Morgan County

Brogdon, Paul Preston, Jr., b 22, mc Arkansas 45, recip. Arkansas 70, Physicians & Surgeons Clinic, Highway 31 North, Hartselle, Alabama 35640 GP

Thomas, Frank Philip, b 35, mc Alabama 65, sb 66, 13th Avenue at Medical Drive, S. E., Decatur, Alabama 35601 ObG

Walker County

Dunham, William King, Jr., b 42, mc Alabama 68, recip. NBME 69, P. O. Box 1389, Jasper, Alabama 35501 GP

MEMBERS DECEASED

Butler County

Speir, Henry P., Greenville, Alabama, Deceased 2-13-71

Choctaw County

Paul, William G., Butler, Alabama, Deceased

Conecuh County

Carter, William R., Repton, Alabama, Deceased 1-29-71

MEMBERS REMOVED

Calhoun County

Clark, Charles Francis, Boulder, Colorado, Moved from State

CHANGES OF ADDRESS

Baldwin County

Foster, John E., present Foley, to P. O. Box 697, Foley, Alabama 36535

Van Wezel, Norman, present Foley, to P. O. Box 790, Foley, Alabama 36535

Calhoun County

Gibbins, George W., present Anniston, to P. O. Box 1516, 1029 Christine Avenue, Anniston, Alabama 36201

Reaves, John E., present Anniston, to P. O. Box 1516, 1029 Christine Avenue, Anniston, Alabama 36201

Clarke County

Dozier, Jack L., present Fulton, to P. O. Box 8, Fulton, Alabama 36446

Larrimore, Lennox W., present Thomasville, to 411 Wilson Avenue, S. W., Thomasville, Alabama 36784

Larrimore, Roy W., present Thomasville, to 411 Wilson Avenue, S. W., P. O. Box 848, Thomasville, Alabama 36784

Dallas County

Noah, Garrell C., Jr., present Selma, to P. O. Box 498, Doctors Park, New Orrville Road, Selma, Alabama 36701

Geneva County

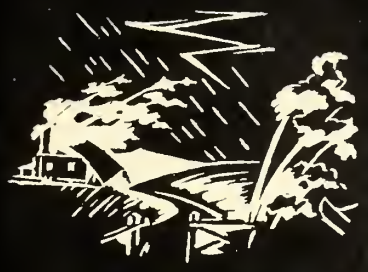
Mitchum, Otis D., present Geneva, to 704 West Maple Avenue, Geneva, Alabama 36340

Jefferson County

Harper, Ann L., present Birmingham, to P. O. Box 2646, 1912-8th Avenue South, Birmingham, Alabama 35202

Pappas, Dennis G., present Birmingham, to 2940 Clairmont Avenue, Birmingham, Alabama 35205

(Continued on Page 681)



Hurricane Camille dumped up to 31 inches of rain on Virginia's Blue Ridge Mountains the night of August 19-20, 1969. She had already devastated the Gulf Coast from Louisiana to Florida, halted her northward journey over Kentucky and Tennessee, then headed eastward over West Virginia and Virginia.
Cooperative Farmer

Emotional stress can be just as destructive to the individual as turbulent, ravaging flood waters are to land and property. Solfoton will contribute to the maintenance of a mental climate for purposeful living.

Solfoton®

SEDATION WITHOUT DEPRESSION

EACH TABLET OR CAPSULE CONTAINS:
Phenobarbital.....16 mg.
(Warning: may be habit-forming)
Bensulfoid (See PDR).....65 mg.

Precaution: same as 16 mg. phenobarbital

DOSAGE: One tablet or capsule every 6 hours will sustain mild sedation.

Available in three forms to satisfy prescribing circumstances:

TABLETS	100s	500s	5000s
CAPSULES	100s	500s	1000s
TABLETS S/C	100s	500s	4000s

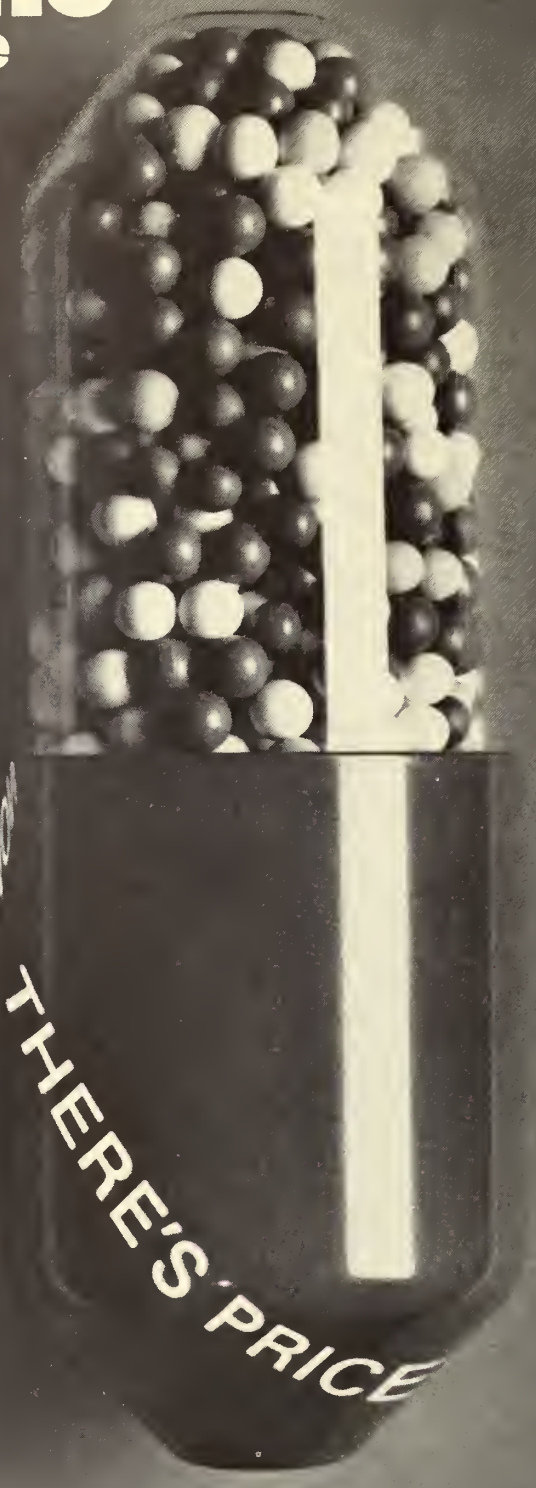
Federal law prohibits dispensing without prescription

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

Thorazine®

brand of chlorpromazine

versatility
quality
experience



NOW THERE'S PRICE

Smith Kline & French Laboratories SK&F

(Continued from Page 678)

Madison County

Frierson, Wallace B., present Decatur, to 7604 Teal Drive, Huntsville, Alabama 35802

Marion County

Johnson, William P., present New Ulm, Minnesota, to Heron Lake Nursing Home, Heron Lake, Minnesota 56137

Montgomery County

Brock, William M., present Montgomery, to 1722 Pine Street, Montgomery, Alabama 36106

Morgan County

Brown, William A., Jr., present Hartselle, to P. O. Box 1066, Hartselle, Alabama 35640

Danley, Rhett G., Jr., present Decatur, to P. O. Box 1029, 222 Gordon Drive, S. E., Decatur, Alabama 35601

Jackson, Laurence S., present Decatur, to P. O. Box 1928, Decatur, Alabama 35601

Naylor, Lionel Z., present Decatur, to P. O. Box 1029, Decatur, Alabama 35601

Sibrans, Dyrc F., present Decatur, to P. O. Box 1928, 13th at Medical Drive, S. E., Decatur, Alabama 35601

Smith, John T., Jr., present Decatur, to P. O. Drawer "I", Decatur, Alabama 35601

Tune, Leon J., present Decatur, to P. O. Box 1928, Decatur, Alabama 35601

Wiley, James B., Jr., present Decatur, to P. O. Drawer "I", 222 Gordon Drive, S. E., Decatur, Alabama 35601

Tuscaloosa County

Patrick, Killough H., Jr., present Tuscaloosa, to 816-15th Street East, Tuscaloosa, Alabama 35401

Reim, Norman H., present Tuscaloosa, to 3 Forest Lake Drive, Tuscaloosa, Alabama 35401

Tarwater, James S., present Tuscaloosa, to 1213 McFarland Boulevard, N. E., Tuscaloosa, Alabama 35401

Walker County

Russell, Bruce W., present Carbon Hill, to Box 426, Sumiton, Alabama 35148

NEW TELEPHONE NUMBERS

Brock, William M., Montgomery	263-7596
Chenault, John M., Morgan	353-3463
Daniel, William A., Jr., Jefferson	934-5258
Dawson, Harris P., Montgomery	262-8264
Duke, Warren C., Talladega	362-7120
Dunham, William K., Walker	387-2161
Frierson, Wallace B., Madison	883-1626
Herod, Joseph W., Jr., Coffee	347-2233
Jackson, Laurence S., Morgan	355-5315
Kilpatrick, Troy F., Lawrence	637-2708
Larrimore, Lennox W., Clarke	636-4475
Larrimore, Roy W., Clarke	636-4475
Mitchum, Otis D., Geneva	684-9400
Naylor, Lionel Z., Morgan	355-6414
Pappas, Dennis G., Jefferson	251-7169
Patrick, Killough H., Jr., Tuscaloosa	345-7676
Reim, Norman H., Tuscaloosa	758-5174
Russell, Bruce W., Walker	648-6637
Tarwater, James S., Tuscaloosa	345-6511
Thomas, Frank P., Morgan	353-0261
Weil, Warren B., Walker	387-2161

MEMBERS REINSTATED

Calhoun County

Fagan, Philip John, b 17, mc Creighton 42, recip. Oregon 53, 429 East 9th Street, Anniston, Alabama 36201 Or

MEMBERS TRANSFERRED

Lawrence County

Kilpatrick, Troy Frank, Courtland Clinic, P. O. Box 400, Courtland, Alabama 35618, from member Morgan County Medical Society to member of Lawrence County Medical Society GP

Talladega County

Duke, Warren Cecil, P. O. Box 476, Talladega, Alabama 35160, from member Shelby County Medical Society to member of Talladega County Medical Society GP

Walker County

Weil, Warren Burke, Jackson Clinic, P. O. Box 1389, Jasper, Alabama 35501, from member Jefferson County Medical Society to member of Walker County Medical Society I

Century-Old Doctor's Office A Medical Museum

Physicians in the family of Francis, extending by one branch all the way back to to the patriot Patrick Henry and by another to James Marion Sims, are being honored in a way by the preservation of a doctor's building in Jacksonville.

Only the name of their kinsman James Carrington Francis, M. D., will appear on the unique medical museum being established in the venerable Calhoun County town, but for those with imagination their shades will be hovering.

For the blood streams of the Henrys, the Sims, the Clarks, the Brockmans, the Deans, the Parks, and many another family remembered in Southern history, blended in the veins of this Dr. Francis who moved to town in that same year—1834—when its name was changed to Jacksonville to honor the hero of Horseshoe Bend and the then President of the United States. It was at that time the county seat of Calhoun.

This was a long time ago—137 years ago. But there are still surviving links with those distant horse-and-buggy days and medicine-from-a-saddlebag. There's the building that once sat on the front lawn of the Francis home, serving as a combination doctor's office and apothecary shop. And there is the person of another James Carrington Francis, now 85 years old and now residing in San Antonio, Texas, who as a sickly baby in arms was once his uncle's patient in this same building!

Mr. Francis reminisces of those distant days, around 1887, a year before his uncle's death, in a letter to his sister-in-law, Mrs. Rosa Francis, the mother of Jacksonville's present-day Dr. James Carrington Francis. The Texan, Mr. Francis, wears the same distinguished given names, known from babyhood as "Jamie," and dates his letter 5 February 1971.

Just how long the present building existed before the war that split a nation apart, with wounds that have never healed, is not known. There were no building permits in that day. But it did stand on the lawn of the Francis home, before and after that conflict, serving as a "drug store," a doctor's office and doubtless many times as an improvised operating room.

HEALING AND MEDICATING were the businesses of this building years before Alabama seceded from the Union. And after the war clouds cleared away it resumed its compassionate career under guidance of the same doctor, whose name is being memorialized in the conversion of this building to an Apothecary and Medical Museum. . . In the lower picture is another antique, a Ford of ancient vintage, whose restoration is an example of the hobby of another doctor and descendant of the same name—James Carrington Francis, M. D. (inset).

Its establishment as a medical museum, formally approved by the Calhoun County Medical Society and applauded by the Med-

ical Association of the State of Alabama, saw its removal from the center of town to a special site prepared for it, its reconditioning, and, under State auspices, artifacts and memorabilia of medicine's revered past are being solicited for it.

The museum plan was initiated by The General John H. Forney Historical Society, of which Lt. Gen. Edward M. Almond is president, and with the active coordination of effort by the Alabama Historical Commission. The latter is headed by Mr. W. Warner Floyd as Executive Director, through whom contributions of medical and surgical instruments and apothecary appurtenances may be made in Montgomery at 305 South Lawrence Street.

James Carrington Francis, M. D., whom the museum specifically honors, was born on Thursday, 26 July 1810 in Rhea County, Tennessee. His father was the first sheriff of that county and his mother, the former Hannah Henry, was a sister of the Virginia patriot. He studied medicine in Knoxville, Tenn., and Louisville, Ky., and was admitted to the practice of medicine before marrying Miss Amy Ingram of Putnam County, Georgia, and subsequently moving with his growing family from Tennessee to Alabama. Their son Miller, destined for a distinguished but brief medical career, was with Gen. Joe Wheeler in the War of the 1860s and Gen. John Tyler Morgan said of him later: "He was the only surgeon I ever saw who would dress a wounded man on the firing line. He refused to stay in the rear."

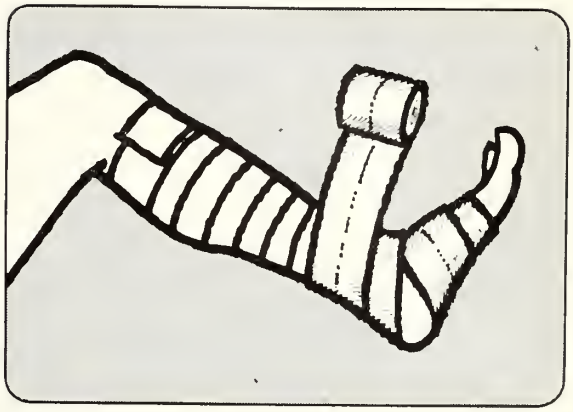
The genealogy of this family reads like a page from the rollcall of famous people, and medicine is a dominant profession throughout. One might list from connections past and present such names as Dr. Courtney James Clark, Dr. James Searcy, Dr. Thomas Washington Sims, Dr. William Gray Meharg, Dr. Shelton Meharg, Dr. Roscoe Meharg, Dr. P. H. Brothers, Dr. Hugh Ellison Gray, Dr. John A. McKown, Dr. Benjamin Franklin Fowler, Dr. Micajah Berry Harrison, Dr.

(Continued on Page 684)

PRIMER®

PLUS

Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

EDWARD TAYLOR Ltd.
A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name ..... M.D.

Address .....

City .....

State ..... Zip .....

(Continued from Page 683)

John Pinckney Miller, Dr. Edwin C. Fleming, and appropriately enough the full name of the physician whom the Jacksonville museum memorializes is perpetuated in his great-grandson, James Carrington Francis, M. D., who is in general and industrial practice in Anniston today, an active member of the Calhoun County Medical Society.

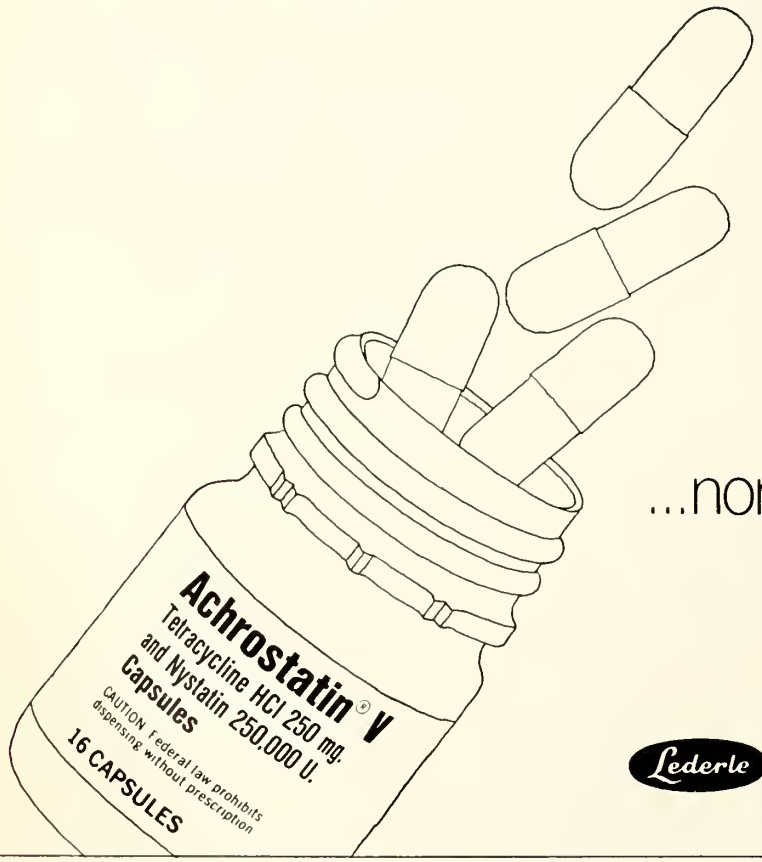
And just to complete the article, the current Dr. Francis may qualify today for one of the Journal's popular features, "Hobbies to Fill a Doctor's Leisure," and tomorrow for that other popular feature, "Fathers-and-Sons in Medicine." He likes collecting and restoring cars of ancient vintage (currently a Ford) and his younger son, Thomas Eskridge Francis (born 18 April 1950) is currently pursuing a pre-med course at the University of Georgia.

AMA Drug Evaluations

A new all-in-one reference book of authoritative, objective information on the drugs most commonly used by physicians, as well as new drugs and those in the official drug handbooks, will probably be off the press by the time this issue of The Journal reaches the MASA membership.

Dues-paying members of AMA will receive copies of this book as a part of their membership benefits. Additional copies are available from the AMA to others at a basic price of $15, with reduced rates to students and for bulk shipment orders.

The 1,040-page guide covers more than 1,200 single entity drugs and mixtures. And it describes the uses, adverse reactions, dosage, preparations and supplier for each drug.



of the tetracycline-nystatin products

...none is lower priced

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

373-1

The pain of arthritis

relieved with MEASURIN® q. 8h. dosage

Double-strength Measurin timed-release aspirin offers a new kind of control for your arthritic patients. Each 10-grain tablet has over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means—fast relief, followed by long lasting relief. Throughout the day, Measurin gives your patients freedom from a 4-hour dosage schedule. Measurin can help your patients get a good night's sleep, uninterrupted by the need for an extra dose of aspirin. And, taken at bedtime, it also helps ease morning joint discomfort and stiffness.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON

BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN
ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief and to help relieve early morning stiffness, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

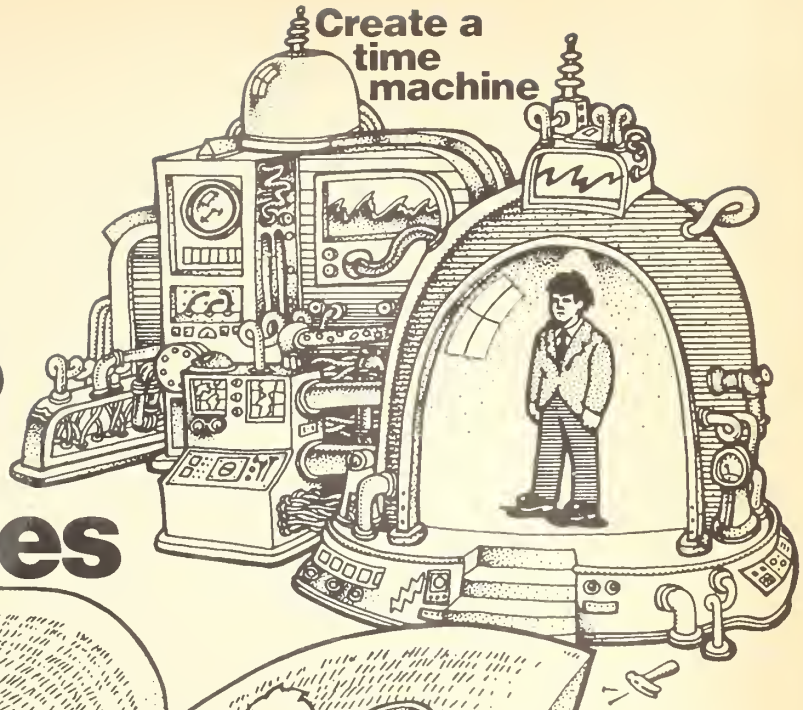
Accredited by the Joint Commission on Accreditation of Hospitals.

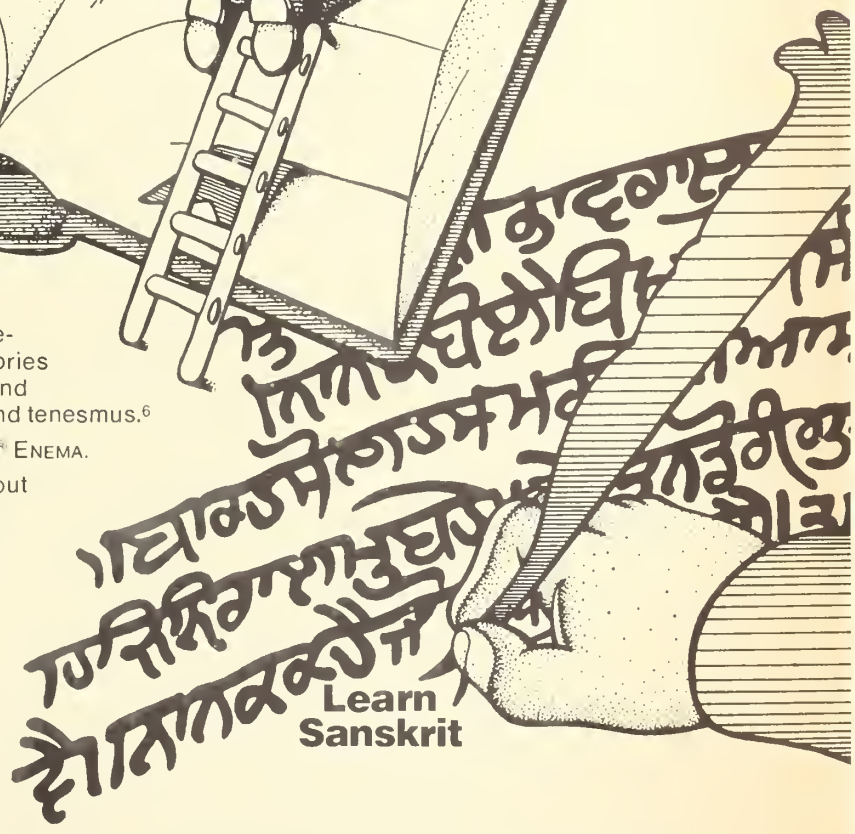
Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

What to do until suppositories work:





Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

Fleet pharmaceuticals

Warning: Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present.
Caution: Do not administer to children under two years of age unless directed by a physician.

References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964

When irritable colon feels like this

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

- ☐ belladonna alkaloids—for the hyperactive bowel
- ☐ simethicone—for accompanying distension and pain due to gas
- ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

pring peeper (tree frog, *Hyla crucifer*):
his small amphibian can expand
s throat membrane with air until it is
vice the size of its head.

INDEX TO ADVERTISERS

Arch Laboratories	677
Blue Cross-Blue Shield	625
The Bradley Center	686
Breon Laboratories	685
Bristol Laboratories	620, 671
Burroughs-Wellcome Company	653
Campbell Soup Company	651
C. B. Fleet	687
Geigy Pharmaceuticals	623
Guest House Motel	639
Highland Hospital	690
Hoechst Pharmaceutical Co.	675
Lederle Laboratories	684
Eli Lilly & Company	1st Cover, 640
Medicenters of America	3rd Cover
Merck, Sharp & Dohme	662, 663
Wm. S. Merrell	676
National Drug	627, 628, 665, 666
Wm. P. Poythress	659, 660, 679
A. H. Robins	633, 634
Roche Laboratories	2nd Cover, 621, 632, 4th Cover
Julius Schmid, Inc.	668, 669
G. D. Searle	656, 657
Smith Kline & French	680
Stuart Pharmaceuticals	688, 689
Edward Taylor	683
Upjohn Company	638, 639, 652

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Associate Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Someone acutely ill needs this bed.

t's available because of Medicenter.

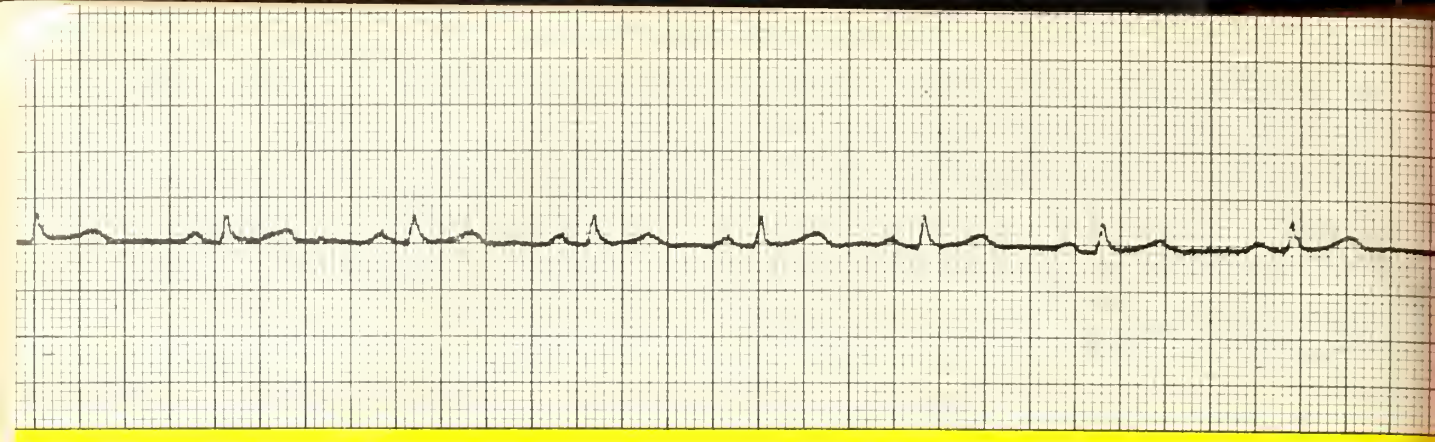
ecause of Medicenter, this hospital bed can be used someone who needs it. That's what Medicenter is about. A recuperative care facility specializing in the ls of patients who no longer require the intensive care general hospital and who are on the road to recovery. ut that's only part of the Medicenter story . . . Beautiful carpeted and draped patient rooms, tasty foods, recon facilities, physical and inhalation therapy are a few of many luxurious health care features that e recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDiCENTER
OF AMERICA

A Nice Place to Get Well

Medicenter of America / Mobile, Alabama 36607



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

PICTURE REPORT ON ANNUAL SESSION
PAGES 732, 733, 734, 735

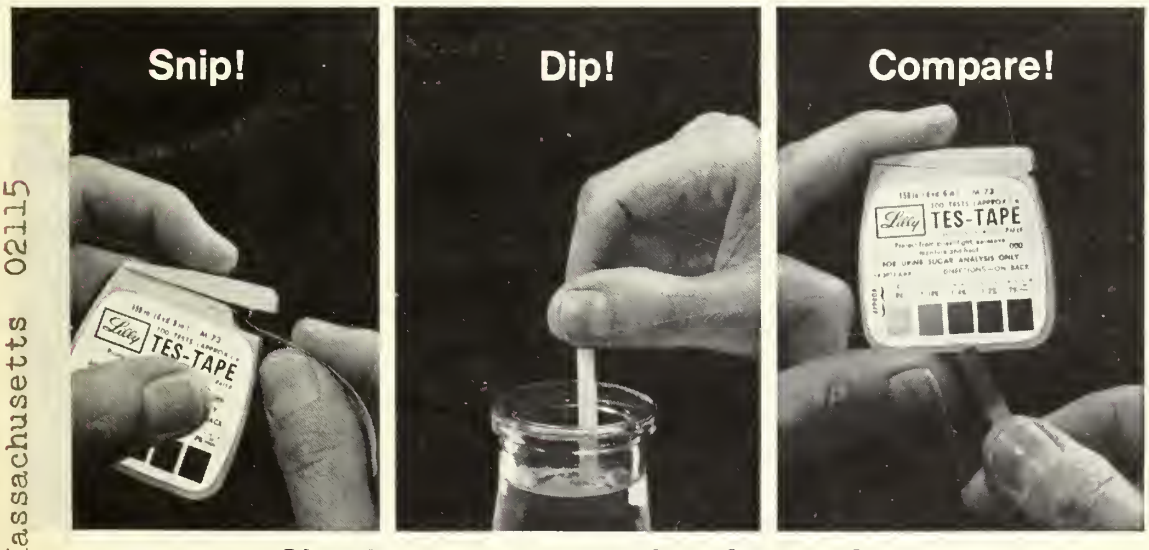
JOURNAL of the Medical Association of the State of ALABAMA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
27 MAY 1971

IN THIS ISSUE

L-Dopa In Parkinson's Disease 709

Lessons Learned in Twenty Years Experience in Treating the Chronic Lung Patient at Home with Mechanical Equipment . . 719



Simple, accurate test for glycosuria

TES-TAPE®
URINE SUGAR ANALYSIS PAPER

Lilly

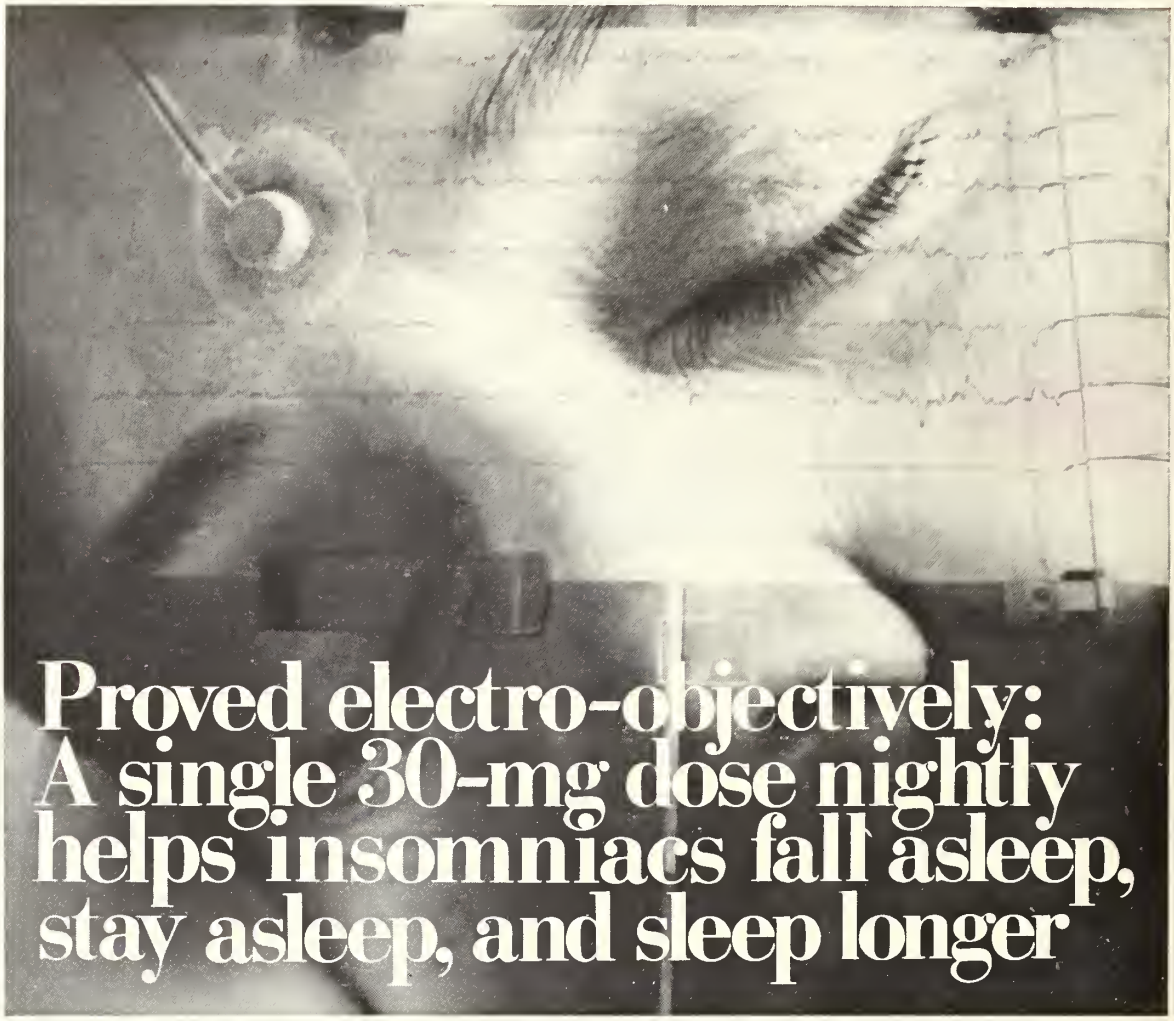
Leadership in Diabetes Research for Half a Century

Additional information available upon request. Eli Lilly and Company, Indianapolis, Indiana 46206

100133

Francis A. Countway Lib. of Medicine
10 Shattuck St.
Boston, Massachusetts 02115

MAY 1971



Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro- oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

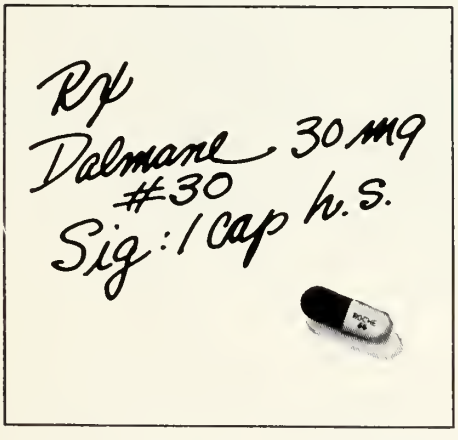
In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
27 MAY 1971

Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

References: 1. Kales, A., *et al.:* "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.:* "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.



For the sleep your patients need

New **Dalmane®**
(flurazepam hydrochloride)

Before prescribing, please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • May, 1971 • No. 11

Office of Publication
19 So. Jackson St. .... Montgomery, Ala. 36104
Subscription Price ..... $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. ..... Montgomery

Managing Editor
L. P. Patterson ..... Montgomery

Assistant Managing Editor
Mary Nell Williford ..... Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman .. Montgomery
C. Kermit Pitt, M. D. ..... Decatur
H. H. Hutchinson, M. D. ..... Montgomery
William L. Smith, M. D. ..... Montgomery
L. P. Patterson ..... Montgomery

Officers of the Association

President
Archie E. Thomas, M. D. ..... Montgomery

President-Elect
F. M. Phillippi, Jr., M. D. ..... Brewton

Vice-Presidents
J. E. Cameron, M. D. ..... Alexander City
Wood S. Herren, M. D. ..... Birmingham
R. E. Foy, Jr., M. D. ..... Enterprise
W. T. Wright, M. D. ..... Mobile

Secretary-Treasurer
William L. Smith, M. D. ..... Montgomery

Executive Director
L. P. Patterson ..... Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. ..... Decatur
J. P. Collier, M. D. ..... Tuscaloosa
Paul W. Burleson, M. D. ..... Birmingham
L. L. Hill, M. D. ..... Montgomery
M. Vaun Adams, M. D. ..... Mobile
J. D. Bush, M. D. ..... Gadsden
E. L. Strandell, M. D. ..... Brewton
John W. Davis, Jr., M. D. ..... Montgomery
J. Garber Galbraith, M. D. ..... Birmingham
H. G. Hodo, M. D. ..... Fayette

State Health Officer
Ira L. Myers, M. D. ..... Montgomery

Delegates and Alternates to the American Medical Association

(Terms expiring December 31 of year shown.)

1971
Delegate—M. Vaun Adams, M. D. ..... Mobile
Alternate—E. L. McCafferty, Jr., M. D. ..... Mobile

Delegate—P. W. Burleson, M. D. ..... Birmingham
Alternate—Robert Parker, M. D. ..... Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. .. Fairfield
Alternate—W. E. White ..... Anniston

1973
Delegate—O. Emfinger, M. D. ..... Union Springs
Alternate—E. B. Glenn, M. D. ..... Birmingham

Delegate—Paul W. Burleson, M. D. .... Birmingham
Alternate—J. Michaelson, M. D. ..... Foley

CONTENTS

President's Page 694

The Woman's Auxiliary 698

Editorial Comment 702

Life Expectancy Favors Soldier Over Civilian! 702

Remember When Tonsillectomy Was Minor Surgery? 702

Scientific Section 709

L-Dopa In Parkinson's Disease, Irwin Lewis, M. D., F. R. C. P. (C), Birmingham 709

Lessons Learned In Twenty Years Experience In Treating The Chronic Lung Patient At Home With Mechanical Equipment, D. S. Tysinger, Jr., M. D., Dothan 719

Community Mental Demonstration Project 726

Around the State 732

Picture Report on Annual Session 732

Fathers And Sons in Medicine 743

Hobbies To Fill A Doctor's Leisure 745

Vital Statistics 746

Physician Placement Service In Alabama 756

Alabama Department of Public Health 758

Air Pollution, Joyce Murphree 758

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone USP

Makes water, not waves.

You know diuretics medically.

But have you met them socially?

yte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

n® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* nsitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which e used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and ion) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium ients immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of ring age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic nation of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte ce, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and m supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, n, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic sion, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, cytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and titis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of nds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other *v Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please omplete prescribing information.*

Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

President's Page

Archie E. Thomas, M. D.

Dear Doctor:

The Medical Association of the State of Alabama has conferred upon me the highest honor within its power by electing me President in Annual Session at Birmingham, Alabama on April 17th.

In all humility, I extend to you my deep appreciation for the confidence you have expressed in my ability to fulfill the awesome responsibilities of this office. While I am convinced that the preservation or destruction of the free practice of medicine, as you and I have known it, will be determined within our lifetimes, I am equally certain that the power to determine Medicine's fate rests equally upon all our shoulders.

Not the least of these efforts must be directed toward the enactment of new legislation and the repeal or amendment of present laws which adversely affect the doctor-patient relationship and increase the costs of patient care.

I am committed to make all necessary sacrifices to preserve the profession of medicine for posterity. But no man, alone, can stem the tide and I call upon you, as my friend and colleague, to lend me your support.

In the months to come I hope to communicate frequently with you in delineating the most pressing problems relating to the practice of medicine. Please be assured that I will treasure your counsel and assistance as we work together to chart a proper course.

I sincerely solicit your prayers and your help. With highest personal and professional regards, I remain,

Sincerely yours,

Archie E. Thomas, M. D.
President

It is said that a river becomes crooked, following the line of least resistance. So does man. Better to remain silent and be thought a fool than to speak and to remove all doubt.

In essentials, unity; in nonessentials liberty; in all things, charity.

—Abraham Lincoln (1809-1865)

"Around the World in 80 Days"...

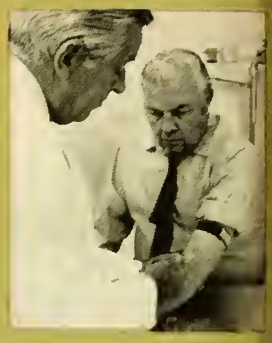
. . .An expense-paid trip with one hitch --
a 60-day hitch in a South Viet Nam civilian hospital delivering vitally needed medical care to the people of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

Program Director
Volunteer Physicians for Viet Nam
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

in stable adult diabetes, if diet alone fails...



start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

A Distinctive Oral Hypoglycemic

a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

DBI®-TD
(phenformin HCl)
timed-disintegration capsules 50 mg.

lowers elevated blood sugar

How to prescribe DBI®-TD (phenformin HCl)

To start with DBI-TD

Week 1 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal.

Week 2 Continue effective DBI-TD dosage.

If necessary, add an additional capsule to the A.M. or P.M. dose.

Thereafter Continue effective DBI-TD dosage.

To transfer from sulfonylurea therapy to DBI-TD alone: The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

To transfer from sulfonylurea therapy to combined therapy with DBI-TD: The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

ndications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary. **Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes that s uncomplicated and well regulated on insulin; acute complications of diabetes (metabolic acidosis, coma, infection, gangrene); surgery; severe hepatic disease; renal disease with uremia; cardiovascular collapse, after disease states associated with hypoxemia. **Warning:** Use during pregnancy is to be avoided. Until adequate data on the effects of DBI on the human fetus are available, such use can be considered experimental. **Precautions: Starvation Ketosis,** which must be differentiated from "insulin lack" ketosis, and is characterized by ketonuria n spite of relatively normal blood and urine sugar, may result rom excessive DBI therapy, excessive insulin reduction or nsufficient carbohydrate intake. Adjustment of DBI-TD or nsulin dosage, or supplying carbohydrates, alleviates this state. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING BLOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead o lactic acidosis. To differentiate lactic acidosis from ketoacidosis, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

The Woman's Auxiliary

President, Mrs. Gilder L. Wideman
President-Elect, Mrs. George Hansberry
Northwest District Vice President, Mrs. Donald J. O'Brien
Northeast District Vice President, Mrs. Fred C. Ballard
Southeast District Vice President, Mrs. J. E. Dunn, Jr.
Southwest District Vice President, Mrs. J. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Behind Every Successful Man

Poets and historians agree that behind every successful man there's a woman. Physicians have an even greater advantage for behind you is a Medical Auxiliary. In the practical application, Alabama M.D.s have 1,527 ladies who daily support and represent your ideas and ideals in every phase of community life.

Realizing your over riding interests in medical education and research, your Auxiliary has raised $114,817.79 in past years *to be used in Alabama.* This year we raised over $25,000 for Alabama medical education and research. We recruit health personnel and represent you in every phase of civic, cultural, church and political projects.

Like it or not the doctor's wife represents medicine. What she says and what she does is interpreted in the light of her being an M.D. wife. This is the reason it is so imperative that she be informed. Keeping informed, as you know, is not easy. This is one of the biggest roles that your State Auxiliary can do for you. Through meetings, publications and letters your wives gain information which can be obtained in no other way and from no other source.

We are small in numbers when compared to the total state population. Our influence is many times our membership total. It is our intention to use this influence for the betterment of our communities and state. To be as effective as we can be, we need every doctor's wife as an informed Auxiliary member. At this writing we are about 500 members short of our potential membership. If your wife is among this number join her. See that she receives the publications and letters and encourage her to attend Auxiliary meetings. Thirty-eight counties have organized Auxiliaries. To join, simply contact a member (especially an officer), say you want your wife to be a member and pay her dues.

Mrs. Gilder L. Wideman

Mrs. Gilder L. Wideman (Frances): President 1971-72 for WAMASA; Wife of Gilder L. Wideman, M. D.; Gil is Ob-Gyn with Gravlee-Wideman Woman's Clinic, Birmingham; Frances is mother of Elizabeth, Anne Margaret, Katherine and John Wideman. She attended Auburn, a former medical technologist (ASCP). She is active in church, politics and education with special interests in children and youth.

(Continued on Page 701)

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended

T-107/4/71/U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information — Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps

(quinine sulfate 260 mg., aminophylline 195 mg.)

(Continued from Page 698)

Dues differ from one Auxiliary to another because each group has various projects which they feel best for their county. In counties which have no organized Auxiliary, dues of $8 per year pay state and AMA Auxiliary memberships. This check should be mailed to Mrs. J. P. Brooke, Treasurer, 112 Wavery Circle, Bessemer, Alabama 35020. Your wife will be welcomed to any Auxiliary meeting held in Alabama (the AMA, too).

There are wives with several small children who feel they cannot participate in meetings, projects, etc. at this time. They can read the publications to know what is happening. They speak with the butcher, the baker and the candle-stick maker. Some wives hold a demanding job in another worthwhile organization and cannot take leadership roles in the Auxiliary now. They represent medicine in these groups even unintentionally. Some wives are not well physically and cannot even read the letters and publications. Their dues can support those who have the time and health to do the job we all want done.

Yes, you are successful and we are proud of any role we can play to make it so. We are your Auxiliary and welcome any comments and suggestions of ways we can help you anywhere at any time.

Frances Wideman
President

More divorces are caused by bad coffee than by good whiskey.

—Arnold Glasow

For Insomnia...one capsule for the rest of the night

NOLUDAR® 300 (methyprylon)

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Life Expectancy Favors Soldier Over Civilian!

The badly wounded soldier by his shattered halftrack at a Vietnamese battle scene has a better chance of surviving than his badly injured brother by his wrecked car on a rural highway in Alabama or California or Kentucky or even in Pennsylvania.

Hospital corpsmen will probably be at the soldier's side minutes after a walkie-talkie has summoned them. They'll be fully armed with blood plasma, antiseptics, bandages and know-how. And by the time they have done a temporary patching job, a helicopter will be hovering overhead; while at the end of a short hop will be competent surgeons, nurses and hospital facilities.

Contrast that with the injured lad on a country road. A telephone is apt to be a mile away, if he has companions able to walk to it. An ambulance—if one is available anywhere—is probably hours away. And if an ambulance does get there, to find the accident victim still breathing, chances are it will carry with it no trained personnel, no oxygen, no anything but transportation.

At the nearest hospital the injured man is quite apt to find that it isn't this hospital's turn to supply emergency care. There is no first-aid unit, no staff physician, not even an intern, or an available nurse.

More than that the wounded soldier will have a Purple Heart service ribbon to wear gloriously in his lapel for the rest of his life, while his civilian brother, miraculously recovered from his hurts, may face court action to punish him for his sins.

The two continually recurring situations are simple illustrations of cause and effect, a way of matching military order against democratic disorder, regimentation against permissiveness.

Remember When Tonsillectomy Was Minor Surgery?

Continuing change . . . and adjustment to change . . . are identifying marks in the rise (and fall!) of every civilization. They are also the story of every surviving profession . . . and particularly medicine.

How many remember when heat and cold represented opposing views in the treatment of the sick? Nearly every town with two alert physicians would find one on either side of the controversy. Even burns were agonizingly treated with heat by those who advocated the application of heat.

Today there is a vital place for both procedures in the modern practice of medicine, as witness instrument sterilization and cryosurgery.

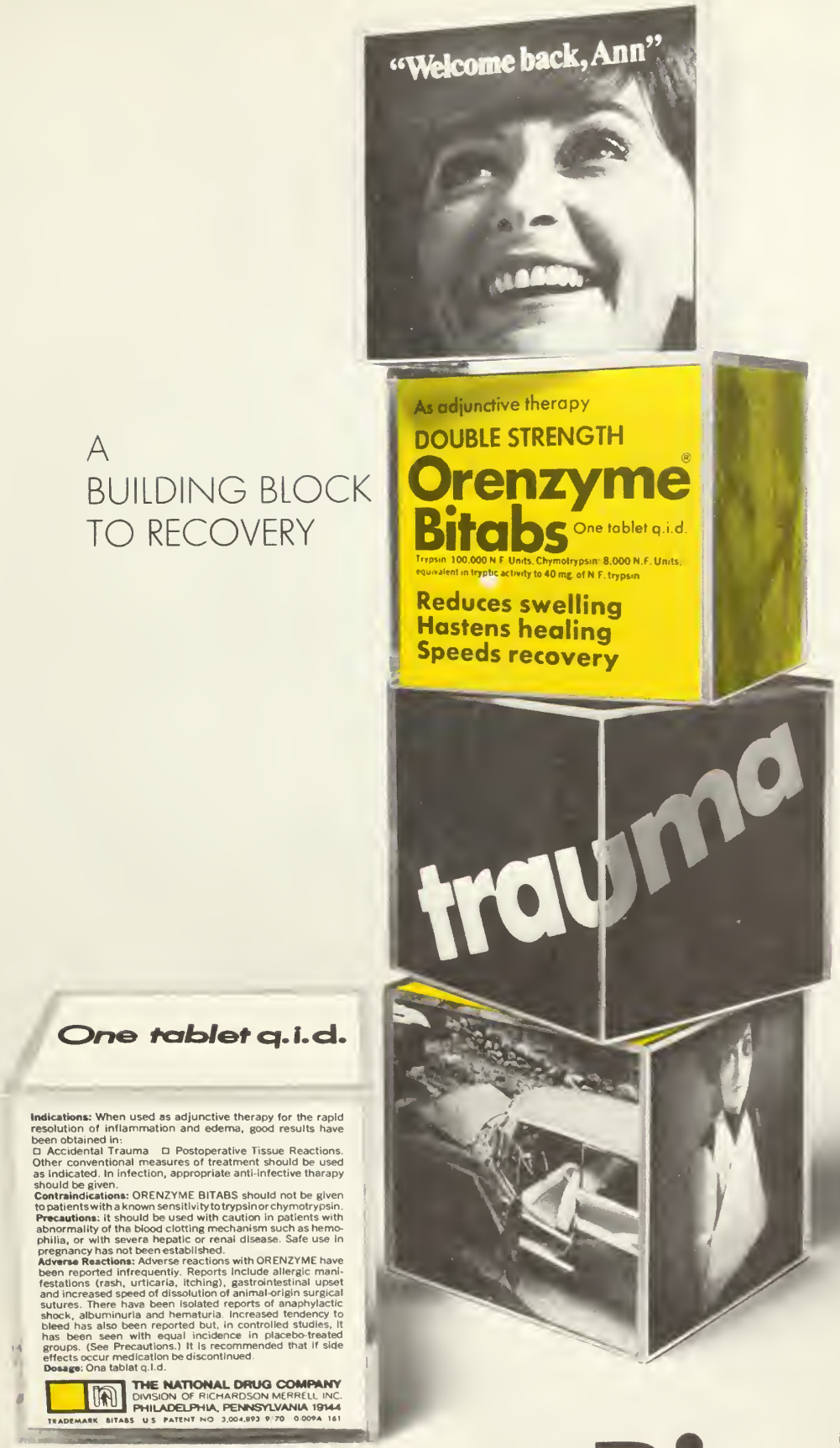
There was a time, half a century ago, when appendectomies were frequent and fashionable.

And one needn't go too deeply into the early days of the 20th Century to recall when large and affluent families, when one of the children developed infected tonsils, would take over a hospital ward for mass tonsillectomies.

Now, hear this, from a special article in

(Continued on Page 705)

A
BUILDING BLOCK
TO RECOVERY



Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrachlaride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantain 0.14 Gm.)

Contraindications: Known sensitivity to sulfanamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonomides should be observed because of the possibility of absarptian. Burning, increased local discomfart, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once ar twice daily.
Supplied: Cream – Four-ounce tube with or without applicatar. Suppositories – Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

(Continued from Page 702)

E.E.N.T. Digest written by a California physician:

"Tonsillectomy, with or without adenoidectomy, is a major, not a minor, surgical procedure. It should be performed by Board-certified or Board-eligible surgeons and not as an office procedure, but rather in the hospital which includes adequate operating facilities and anesthesia. The combined use of general and local anesthesia is preferred. Methods which have proved effective in the control of operative as well as postoperative bleeding and other complications have been discussed" (earlier in the article).

Continuing change identifies every civilization . . . every age of Medicine.

Sometimes it is said that man cannot be trusted with the government of himself. Can he then be trusted with the government of others?

—Thomas Jefferson (1743-1826)

Ef-
fic-
iency

Dicarbosil®
ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

HIGHLAND HOSPITAL

Asheville, North Carolina
Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY
Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available
Contact: Mrs. Elizabeth Harkins, ACSW, *Coordinator of Admissions*
or

Samuel N. Workman, M. D.
Chief of Clinical Services

Charles W. Neville, Jr., M. D.
Associate Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Law, Medicine and Chiropractic

A Louisiana law barring chiropractors from practicing in the state has been upheld by the United States Supreme Court. The court rejected an appeal brought by a chiropractor who maintained that his constitutional right to pursue "an accepted profession" had been violated.

In declining to review the constitutionality of the law, the Supreme Court ruled that the Louisiana statute properly uses state powers to protect health. The appellant did not contest evidence produced by state courts and by the Louisiana Board of Medical Examiners that he had claimed cures for a variety of diseases and had, in effect, been practicing medicine.

Louisiana is the only state requiring chiropractors to meet the same standards of medical education and training as physicians. The U. S. Supreme Court upheld this principle in a 1966 decision.

A law suit seeking to prevent chiropractors from using the term "chiropractic physician" has been brought by the Medical and Chirurgical Faculty of Maryland. Named as defendants are seven Baltimore chiropractors. MCFM asked for injunctive relief because "members of the public are under the mistaken belief that they are receiving medical care for their conditions."

State licensing tests for more than 400 chiropractors were cancelled in New York after authorities announced the breakup of a ring engaged in the theft and sale of the exams. The Bronx district attorney's office said a minimum of five chiropractors was involved. The office also said it has notified Florida officials of sales of chiropractors' examinations in that state. The New York tests were to be given for chiropractors in practice before 1963, who have until this year to pass the examinations.

—AMA Newsletter

Brief Summary of Prescribing Information— 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Volume 40 May, 1971 Number 11

L-Dopa In Parkinson's Disease

A report on 95 cases and review of the literature

Irwin Lewis, M. D., F.R.C.P. (C)

Birmingham, Alabama

INTRODUCTION

L-3, 4 Dihydroxyphenylalanine (L-Dopa) (Fig. 1) is now the accepted method of treatment for Parkinson's Disease, a chronic neurological disease for which clinicians, up until recently, had to rely on various synthetic anticholinergic preparations. The therapeutic efficacy of these latter preparations was extremely variable and seldom produced dramatic results.

The administration of a large daily dose of L-Dopa, precursor of an important biogenic amine (dopamine) normally found in the basal ganglia, represents a striking example of the application of basic research toward the relief of suffering in patients with a chronic disease.

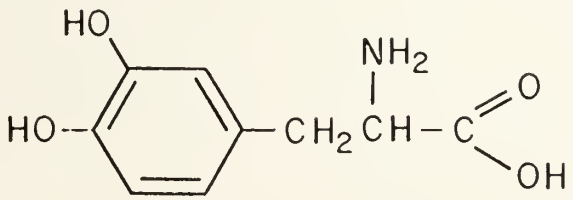
This paper will attempt to review the pertinent literature and present the author's experience with L-Dopa. Hopefully it will provide the reader with a better understanding of the general principles involved. It is hoped that physicians in cities and towns across the State of Alabama will now feel more confident in applying these principles to the treatment of patients with Parkinson's Disease.

ABBREVIATIONS

DOPA	— Dihydroxyphenylalanine
DA	— Dopamine
DOPAC	— Dihydroxyphenylacetic Acid
HVA	— Homovanillic Acid
5-HTP	— 5-Hydroxytryptophan
5-HIAA	— 5-Hydroxyindoleacetic Acid
5-HT	— 5-Hydroxytryptamine

CLINICAL REVIEW

In the early and mid 1960's Barbeau[1] and



(-)-3-(3,4-dihydroxyphenyl)-L-alanine

FIGURE 1

Chemical structure of L-Dopa

Hornykiewicz[2] administered small intravenous dosages of L-Dopa to patients with Parkinson's Disease and reported transient beneficial effects, particularly on akinesia and rigidity. However, the use of L-Dopa in this fashion was soon abandoned as impractical and progress was delayed until Cotzias and his group[3], in 1967, re-stimulated interest in this field. Cotzias was intrigued with the therapeutic possibilities of Dopa because of this earlier work which had suggested shortlived improvement in patients with Parkinson's Disease.

In this initial study, Cotzias et al discovered that the racemic mixture, D, L-Dopa produced rather striking improvement in eight of 16 patients treated. Their approach differed from the earlier investigators in that rather large oral dosages, ranging from three to 16 Grams per day, were used. This discovery represented a clear breakthrough and contrasted rather dramatically with the previous, relatively ineffectual forms of therapy for this chronic neurological illness. In Cotzias' series, the well known hallmarks of Parkinson's Disease either disappeared or showed a marked improvement. Rigidity appeared to be relieved during an earlier phase of therapy, while tremor was much more resistant and was only abolished at higher dose levels or decreased in intensity.

The therapeutic use of D, L-Dopa was soon abandoned in favor of the Levo form (the naturally occurring form) because of previously noted hematological effects (bone marrow depression, Granulocytopenia) attributed to D-Dopa. As D-Dopa is not the naturally occurring isomer and must be changed to L-Dopa (requiring an enzyme D-Aminoacidoxidase) its use was abandoned.

In early 1969 Cotzias and his group[4] now reported on the effectiveness of L-Dopa in 28 patients with Parkinson's Disease. Twenty of these patients responded in such a fashion that their improvements were graded as marked or dramatic. Moderate improvement was noted in four additional cases. Soon after this report on L-Dopa, Calne et al,[5] in February 1969, published the results of their work treating patients with post encephalitic Parkinsonism. This was a double blind study involving 40 patients. The patients were divided into two groups of 20, one group treated with L-Dopa and the other with a placebo. In this study, small dosages of L-Dopa were used ranging from 0.5 to 2.5 Grams per day. Ten of 20 post encephalitic Parkinsonian patients showed very signifi-

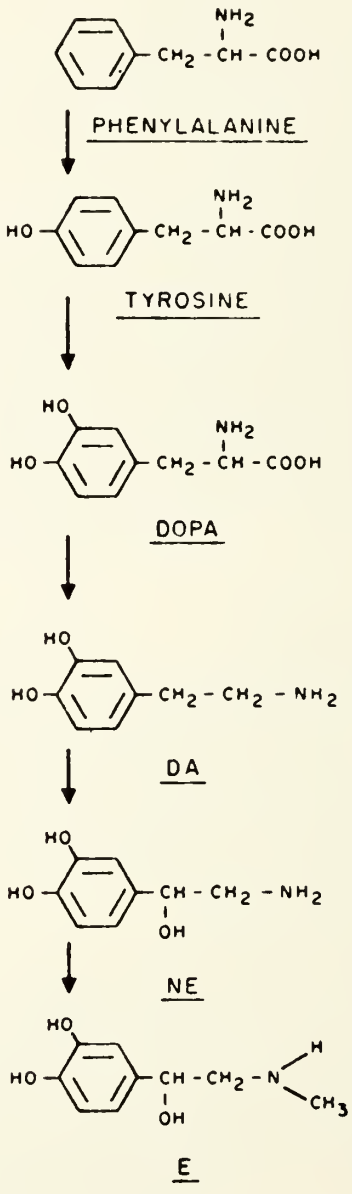


FIGURE 2A

Metabolism of L-Dopa
Norepinephrine and Epinephrine are designated by the abbreviations "NE" and "E".

cant improvements. Five did not respond and[5] others had to be discontinued because of side effects. Adverse reactions were seen in all patients. As noted by other workers[6,7] in the field side effects were clearly dose dependent.

PHARMACOLOGY AND METABOLISM

LevoDopa (L-Dopa) is a natural substance rapidly biotransformed (Fig. 2) and eliminated from the body. Peak plasma concentrations of orally administered Dopa are usually found approximately 2-2½ hours after the dose. In a recent review, Tyce et al[8,9] studied 15 patients with Parkinson's Disease and discovered that in all, the amounts of Dopa in plasma were very low in the morning approximately ten hours after the last orally administered dose. This again indicated that Dopa was rapidly metabolized and peripheral stores were not built up. The concentration of Dopa in the plasma was quite low in their patients and one, receiving a total of 7.6 Grams per day, had a plasma Dopa concentration of 2.48 Micrograms per ML at 2½ hours after a dose of 1.9 Grams.

An aminoacid decarboxylase (Dopadecarboxylase), converts L-Dopa to the biogenic amine Dopamine. Much of this occurs in the periphery and these peripheral regions must be well saturated before there is any significant conversion of L-Dopa to Dopamine in the brain. This is a matter of availability as free L-Dopa will only be present in the plasma in sufficient quantities for CNS conversion to Dopamine, after the peripheral regions have been fully saturated. Because of this peripheral decarboxylation much of the L-Dopa administered to a patient with Parkinson's Disease is not available for transformation into Dopamine in the basal ganglia.

One might ask why we discuss the pharmacology of L-Dopa, a precursor of Dopamine, when it appears to be the Dopamine with which we are most concerned? This point is immediately clarified by the knowledge that Dopamine is incapable of crossing the blood brain barrier and for this reason the precursor, L-Dopa, capable of crossing this barrier and subsequently decarboxylated to Dopamine, must represent our main metabolic consideration.

It has been known that Dopamine concentrations in the Central Nervous System are highest in the putamen and caudate (in contrast to Norepinephrine and Epinephrine whose concentrations are highest in the hypothalamus) although significant quantities are also present in the Substantia Nigra and Globus Pallidus.[10,11] The Parkinsonian brain is significantly depleted of Dopamine and certain drugs capable of producing Parkinsonian-like states, such as reserpine and phenothiazine compounds, are also capable of significantly reducing the Dopamine content of the basal ganglia. Bertler and Rosengren[11] have noted that lesions of the Substantia Nigra are known to result in a decrease in the Dopamine content of the putamen and caudate nuclei. They are also of the opinion that Dopamine acts as a transmitter substance in the brain and Hornykiewicz[2] is of the opinion that Dopamine is an important inhibitory transmitter substance in the Central Nervous System.

As Parkinson's Disease is pathologically characterized by a degeneration of the melanin containing cells in the Substantia Nigra and as there are very important nigro-striatal connections one might easily conceive of a close chemical relationship as well. Present concepts suggest that under normal circumstances the large melanin containing cells of the Substantia Nigra manufacture Dopamine which is then transported along the axons of this nigro-striatal system, finally reaching appropriate nerve terminals in the neostriatum. This Dopaminergic system, by which the Substantia Nigra influences the neostriatum and ultimately the Globus Pallidus, is by no means the entire answer to the Parkinsonian riddle.

The administration of large daily dosages of L-Dopa may interfere with the metabolism

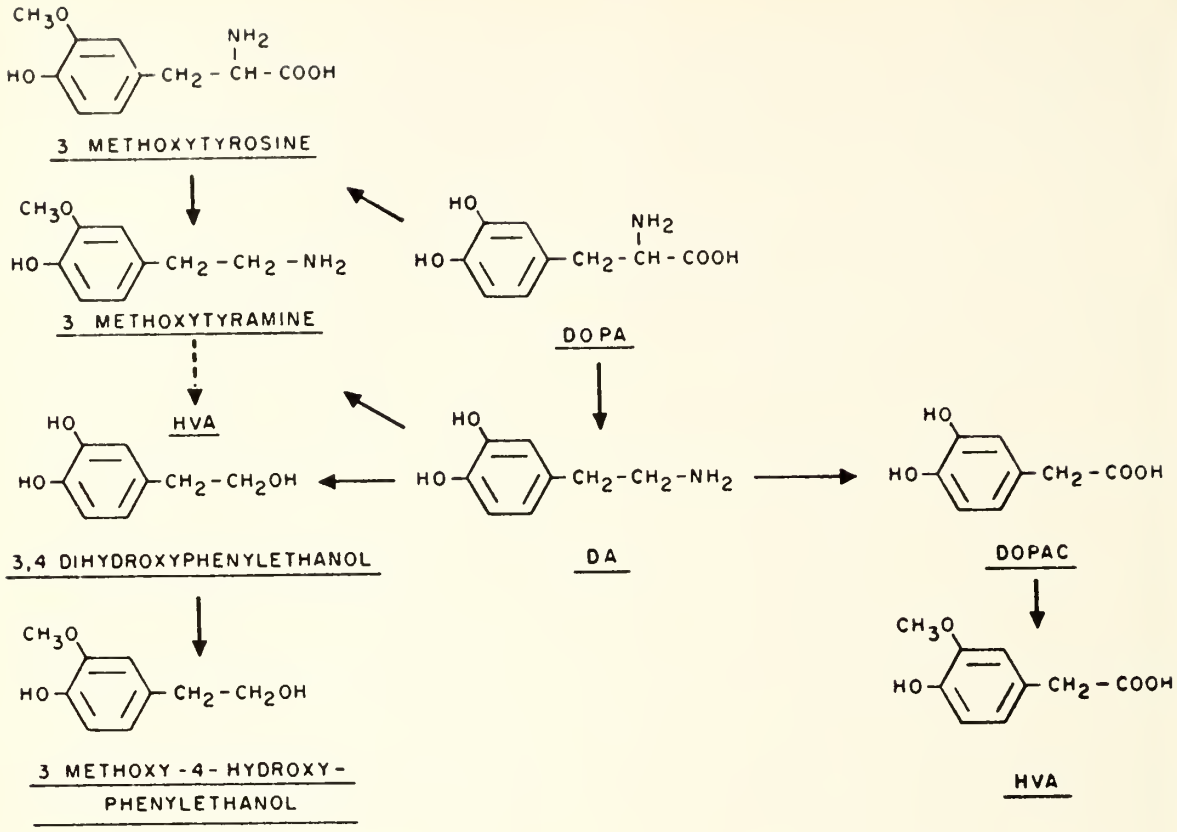


Figure 2B Metabolism of LevoDopa.

of other aminoacids through some variety of metabolic competition. A similar decarboxylase catalyzes the decarboxylation of both Dopa and 5-Hydroxytryptophan (5-HTP) the immediate precursor of 5-Hydroxytryptamine (5-HT or Serotonin). Thus the administration of large amounts of Dopa might competitively affect the formation of 5-Hydroxytryptamine (Serotonin) and in a recent study, Tyce et al[9] demonstrated that in 17 patients with Parkinson's Disease receiving Dopa the urinary concentration of an important serotonin metabolite 5-Hydroxyindoleacetic Acid (5-HIAA) was definitely decreased.

The major urinary metabolites of L-Dopa consist of Homovanillic Acid (HVA) and Dopacetic Acid (DOPAC). The principal urinary catabolic products occur in the following distribution after the oral administration of L-Dopa. Homovanillic Acid (HVA) is the major metabolite of Dopa and accounts for approximately 25 per cent of the administered dose. Dopacetic Acid (DOPAC) accounts for approximately 13 per cent of the dose; Dopamine 2-5 per cent of the dose; Methoxytyrosine 0.5 to 1 per cent of the dose and Dopa itself 0.1 to 0.7 per cent of the dose. VMA (3-Methoxy-4-Hydroxymandelic acid) a major metabolite of Norepinephrine, was only a minor urinary metabolite of Dopa accounting for less then 0.2 per cent of the total administered dose.

RESULTS

113 patients ranging in age from 42 to 83 years were treated with L-Dopa from April 1969 through September 1970. Eighteen of these patients were treated with L-Dopa for periods less than two months and as L-Dopa produces its therapeutic effects rather slowly, a minimum therapeutic interval of at least two months was arbitrarily chosen. Thus, the results obtained with 95 patients

are presented in this paper consisting of 58 males and 37 females. Duration of treatment varied from two months as a minimum, to 18 months as a maximum. Daily oral doses of L-Dopa varied from two to seven Grams.

Sixty-four of the 95 patients (67.4%) clearly improved. Of this group, 20 (21% of the total) showed a mild improvement; 28 (29.5%) showed a moderate improvement and 16 (16.8%) demonstrated a marked to dramatic improvement. Thirty-one patients (32.6% of the total) did not improve. Thus, slightly more than two thirds of the patients treated with L-Dopa in my series demonstrated a clearly noticeable improvement although examination of the results demonstrates that degrees of improvement were quite variable.

L-Dopa was found to be particularly successful in relieving rigidity and akinesia. Although tremor was alleviated in some patients (and in two this relief was striking) this was usually observed after a prolonged therapeutic trial and usually required moderate to high daily doses of L-Dopa often in a range of 5-6.5 Grams per day.

Relief from akinesia and rigidity produced clear and at times striking gait improvements. Many patients no longer shuffled and were much less unsteady. Frequently there was a concomitant return of associational movements, such as armswing bilaterally. Many other aspects of the total Parkinsonian syndrome were improved as well. Many patients could now turn over in bed easily. It was easier for many of them to get in and out of cars. Patients who formerly required help in dressing were now able to dress themselves with the exception of fastening some very small buttons. Thus the problems of everyday living, so troublesome to the Parkinsonian patient, were now considerably reduced.

A significant per cent of all patients experienced some side effects during their course of treatment. Nausea, vomiting, anorexia, psychiatric disturbances, involuntary movements and orthostatic hypotension were the side effects most commonly experienced with nausea, vomiting and involuntary movements being most prominent. Adverse reactions were usually dose dependent and frequently a reduction in the daily dose of L-Dopa was quite effective in controlling the pertinent side effects. Nausea and vomiting were frequently prevented by the administration of L-Dopa after food. Involuntary movements were frequently troublesome, consisting of dystonic head and neck movements; choreiform or choreo-athetoid movements as well as involuntary movements of the tongue, lips and mandible. Again, a reduction in the daily dose of L-Dopa was often sufficient to reduce or abolish these movements, however, at times they were exceedingly troublesome and the concomitant administration of Haloperidol (Haldol) was of further benefit. Although the involuntary movements were a source of discomfort and embarrassment to the patients they were never serious or life threatening and were almost never seen in patients who were not in some stage of improvement. Occasionally it was necessary for some patients to continue to accept a small residual of involuntary movements, even on a reduced daily dose of L-Dopa, however, this was much more preferable to their former state of immobility.

Five deaths occurred in my series and two were attributed to suicide. Four of the five patients had not demonstrated any significant improvement. One (who ingested a lethal dose of ant poison) had demonstrated a 60 per cent over all improvement. The other suicide was in a patient with post encephalitic Parkinsonism who was extremely depressed prior to the administration of L-Dopa. Another patient expired because of the aspiration of food and another succumbed to pneumonia. Finally, one patient suffered a fatal myocardial infarction which was not attributed to L-Dopa. This man, prior to the administration of the drug had a long history of prominent coronary artery disease and had had a previous myocardial infarc-

tion. He had been tolerating L-Dopa rather well and died suddenly one morning.

As two suicides did occur, the patient's pretreatment psychiatric status should be carefully evaluated prior to the commencement of L-Dopa Therapy.[12, 13]

DISCUSSION

The Author's experience with L-Dopa in 95 Parkinsonian patients, from April 1969 through September 1970, closely parallels the results of others. [4-7, 14] It can now be stated with some certainty that orally administered L-Dopa is the medical treatment of choice for Parkinson's Disease and the results are far superior to those obtained in the past with older anticholinergic preparations.

At present, we can predict that 60-70 per cent of untreated patients with Parkinson's Disease (including patients who have undergone Stereotaxic procedures) will improve to some extent on L-Dopa.

Although the use of L-Dopa represents a tremendous advance in the medical treatment of Parkinson's Disease, many questions have been left unanswered. Why do 30 per cent of patients not respond? The answer to this question is unknown. Part of the answer might lie in the careful selection of patients for L-Dopa Therapy. Prior to the administration of this substance, a careful diagnosis of Parkinson's Disease is essential. We as physicians tend at times to think of elderly patients, with various types of tremor in the upper extremities, head tremors or tremors in the lower limbs, as representing varieties of Parkinson's Disease. In some instances this of course is quite true, however, some of these patients undoubtedly have more diffuse cerebral vascular disease with small lacunar infarcts in various portions of the basal ganglia bilaterally and indeed in the cerebellum as well.

Excellent candidates for L-Dopa Therapy are those patients who have the typical and cardinal signs of Paralysis Agitans, such as bradykinesia, cogwheel rigidity, shuffling gait, stooped posture, masking of facial appearance and resting tremor. The middle aged or elderly patient with a focal, resting and/or intention tremor in one upper extremity does not necessarily have Parkinson's Disease. In the absence of other cardinal manifestations, the physician should be rather reluctant to start out on a treatment program which could offer little chance of success and might result in a large number of adverse reactions.

Therapeutic results with L-Dopa, should they occur, will not occur immediately and many patients may not change for 4-8 weeks or possibly longer. It is imperative that patients and their families be advised of this and it should be stressed that the administration of L-Dopa does not represent a cure for Parkinson's Disease. In many ways the administration of L-Dopa parallels the administration of Insulin in Diabetes Mellitus and patients with Parkinson's Disease will have to take L-Dopa daily and regularly.

At present L-Dopa can be obtained in the following forms: 250 Mgm. and 500 Mgm. Capsules; 250 Mgm. and 500 Mgm. scored tablets. In order to avoid the common side effects of nausea, anorexia and vomiting, the physician should exercise great restraint and titrate the daily dose slowly and carefully. At the start, 250 Mgms. b.i.d. or t.i.d. would be suggested, followed by small daily increases (every three or four days) in amounts varying from 250 to 500 Mgms.. On the average, patients will require eventual daily maintenance dosages varying from 3-6.5 Grams. Dosages exceeding eight Grams per day should not be considered. In order to overcome and prevent the occurrence of nausea and vomiting, L-Dopa should be administered with, or after food and never on an empty stomach. I tend to stress this repeatedly to my patients although part of this effect may be central.

As Reserpine and Phenothiazines are capable of depleting the basal ganglia of Dopamine, they should not be administered to a

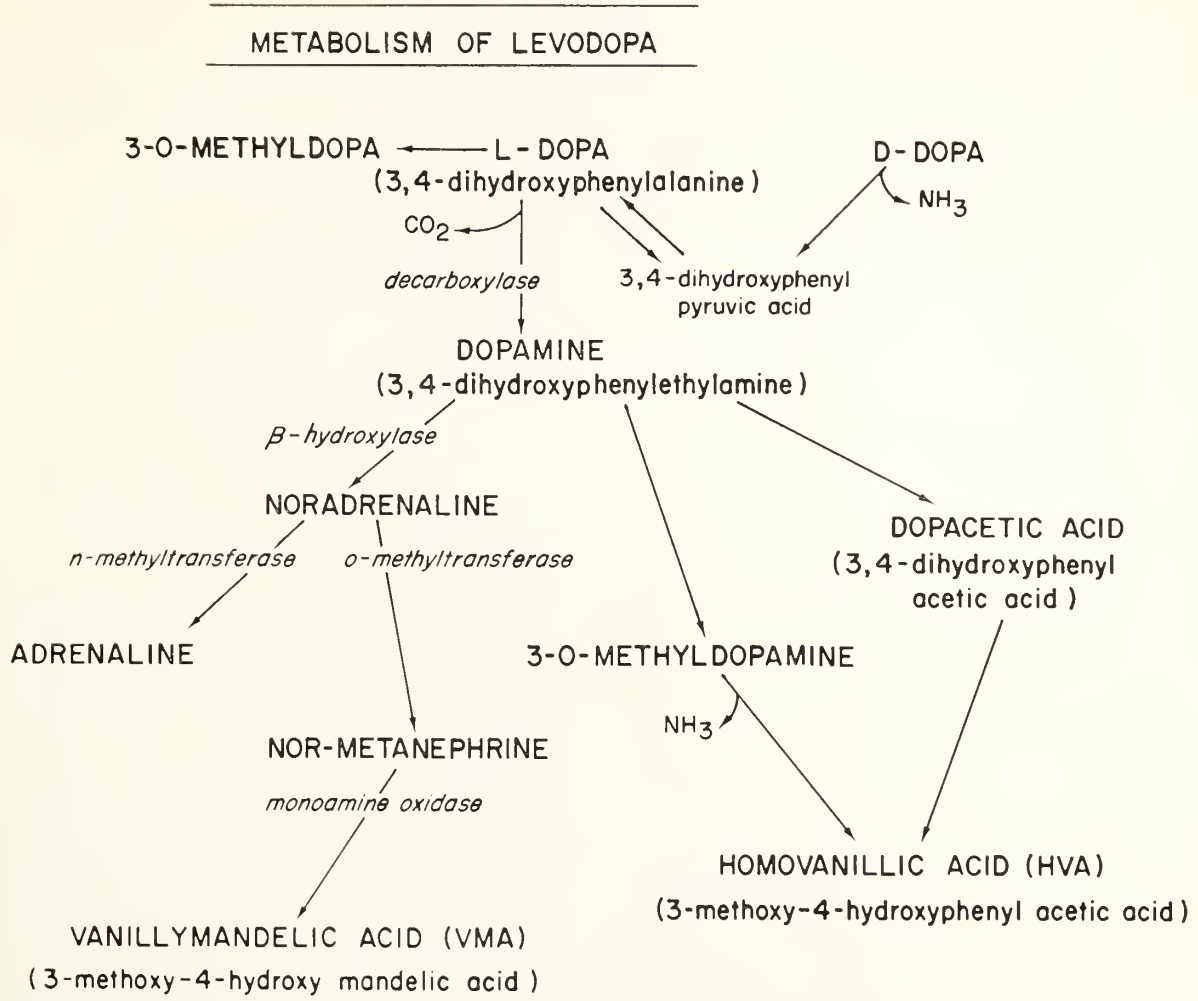


Figure 2C (Summary of Metabolism of LevoDopa).

Parkinsonian patient receiving L-Dopa. It is also known that Vitamin B6 (Pyridoxine) is capable of reversing the effects of L-Dopa[15] as the enzymes needed for the metabolism of biogenic amines in the brain are Pyridoxal dependent. Patients are instructed that under no circumstances should they take vitamins unless the preparation is one prescribed by their physician which does not contain Vitamin B6.

L-Dopa has been used in the treatment of other chronic neurological disorders. Mendell[16] described a case of progressive supranuclear palsy who, because of a low Homovanillic Acid level in the Cerebrospinal Fluid was placed on L-Dopa. This patient was a 52 year old male who, from 1958 through 1963 developed slowness of gait, stiffness, mild dysarthria and bilateral ptosis. In 1963 limited eye movements were also noted and subsequent to this the patient developed a tremor of the left upper extremity. Prior to receiving L-Dopa he was described as having severe bilateral ptosis and striking limitation of voluntary and pursuit eye movements in all directions. Deep tendon reflexes were extremely active and bilateral Babinski signs were noted. The concentration of HVA in the cerebrospinal fluid was reduced.

This patient was treated with L-Dopa and a peripheral Dopa Decarboxylase Inhibitor (MK485). Bradykinesia was diminished; the patient's gait was improved; the tremor of

the left upper extremity disappeared and the defective eye movements were clearly improved. The dose of L-Dopa employed was rather similar to that used in Parkinson's Disease, in association with a peripheral Dopa Decarboxylase Inhibitor. As autopsy findings in this condition do include moderate to severe nerve cell loss and gliosis in the Substantia Nigra it would appear that diminished HVA levels in the cerebrospinal fluid represented a degeneration of neurons which contained or manufactured Dopamine.

Brody et al[17] have reported on decreased levels of HVA and 5-HIAA in the cerebrospinal fluid of seven Guamanian patients with the Parkinsonism-dimentia complex. The depressed levels of HVA and 5-HIAA were similar to those found in Americans with idiopathic Parkinson's Disease. These substances do appear to be derived from the degradation of monoamines in the central nervous system—i.e. Dopamine and Serotonin. Thus, it would be logical to assume that a significant percentage of patients with the Parkinsonism-dementia complex of Guam, would respond to L-Dopa. Homovanillic Acid levels in patients with Amyotrophic Lateral Sclerosis are reportedly low[17] in some cases and, as this disorder does not affect Dopaminergic systems, this finding is a real puzzle.

In early 1970, Mena et al[18] reported on the ability of L-Dopa to modify the clinical signs and symptoms of chronic Manganese Poisoning in 6 Chilean Manganese Miners. Patients with chronic Manganese Poisoning exhibit a Parkinsonian-like syndrome because of the deposition of Manganese in the Globus Pallidus bilaterally in a rather selective fashion. The Globus Pallidus is partially or completely destroyed resulting in a severe clinical deficit often characterized by difficulty in initiating movement. Mena's group studied 6 patients with hypokinetic forms of Chronic Manganese Poisoning and treated them with L-Dopa in oral dosages up to eight Grams per day. Five of these patients responded in a dramatic fashion. Two had severe dystonic movements prior to L-Dopa therapy, characterized by dystonic postures of the neck and the extremities. When daily dose levels had reached three Grams, progressive improvement was noted in this dystonic posturing.

In a recent communication Barbeau[19] reported on the use of L-Dopa (combined with a peripheral Decarboxylase Inhibitor), (R04-4602) in a 15 year old female with Wilson's Disease. Although treated for 15 months with D-Penicillamine her condition deteriorated. D-Penicillamine was discontinued and treatment was begun with L-Dopa and the peripheral Decarboxylase Inhibitor. The patient demonstrated a notable improvement in rigidity and akinesia within two months.

The treatment of Torsion Dystonia with L-Dopa is somewhat controversial. This controversy is well illustrated in a recent Symposium on the Torsion Dystonias in which Barrett et al[20] concluded that L-Dopa administration for periods up to one year failed to produce any sustained improvement whereas Mary Coleman[21] had a different opinion and considered L-Dopa to be relatively effective. Undoubtedly additional studies will be needed in the future with L-Dopa administered to a larger number of patients over a longer period of time. Although reference has been made to a number of different neurological conditions which might be benefited by L-Dopa it should also be noted that L-Dopa clearly increases the choreiform movements of the classical adult form of Huntington's Chorea.

This paper would be incomplete without a discussion of the concept of peripheral Decarboxylation of Dopa and the inhibition of this Decarboxylation.[22,23] As previously noted a large portion of the orally administered L-Dopa is peripherally Decarboxylated to Dopamine and ways have been sought to increase the efficiency of the administered drug by blocking peripheral Dopa Decarboxylase. This has been accomplished with certain Hydrazine Compounds now referred to as peripheral Dopa Decarboxylase Inhibi-

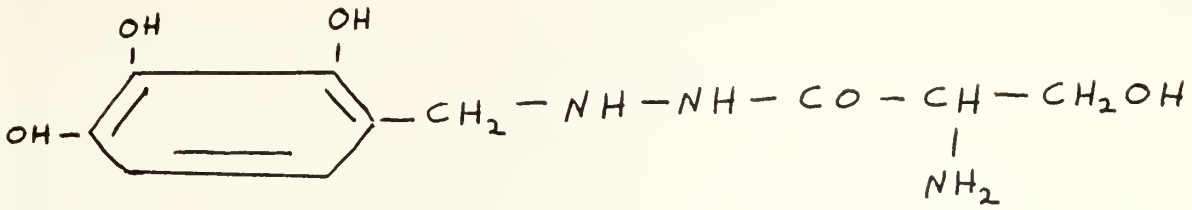


FIGURE 3

Structural formula of a typical peripheral Dopa Decarboxylase Inhibitor—RO4-4602.

tors (Fig. 3) as they do not inhibit the Decarboxylation of Dopa to Dopamine in the brain (They do not cross the blood-brain barrier). One such substance is Alpha-Methyldopahydrazine (MK-485-Merck). A second peripheral Dopa Decarboxylase Inhibitor, a Roche product, is referred to as R04-4602. Unfortunately these compounds are toxic and not widely available. However, their use along with oral L-Dopa permits the use of much smaller daily dosages of L-Dopa.

Cotzias and his group are now working on some analogues of Dopamine.[24] One analogue Apomorphine[25] has certain structural similarities to Dopamine. It has been noted that the subcutaneous administration of Apomorphine produced short-lived effects similar to those of L-Dopa. The production of other Dopamine analogues might well result in the discovery of an artificial neurotransmitter whereas, at present we are now employing a precursor (L-Dopa) from which the brain must then synthesize a neurotransmitter (Dopamine).

CONCLUSIONS

1. The basic principles underlying the use of L-Dopa, a precursor of the important CNS biogenic amine Dopamine, have been presented with a review of the more recent neurological literature.

2. The oral administration of L-Dopa, in relatively large daily amounts is capable of improving 60-70 per cent of patients with Parkinson's Disease. It has firmly replaced synthetic anticholinergic preparations as the medical therapy of choice for this chronic neurological illness.

3. Side effects are common, however, a thorough understanding of the basic principles underlying the use of L-Dopa will reduce the incidence of serious side effects and any physician fully cognizant of these principles should have no hesitation using L-Dopa if the diagnosis of Parkinson's Disease, in the individual patient, has been well substantiated.

4. A brief discussion of Dopadecarboxylase inhibitors has been presented in relation to the known pharmacology and metabolism of L-Dopa.

5. The role of L-Dopa in other varieties of neurological disorders has been briefly reviewed.

REFERENCES

1. Barbeau, A.: Dopamine and Basal Ganglia Diseases. Arch. Neurol., 4:97-102, 1961.

2. Hornykiewicz, O.: Dopamine (3-Hydroxytyramine) and Brain Function. Pharmacol. Rev. 18: 925-964, 1966.

3. Cotzias, G. C., van Woert, M. H. and Schiffer, L. M.: Aromatic amino acids and modification of Parkinsonism. New Eng. J. Med. 276: 374- 379, 1967.

4. Cotzias, G. C., Papavasiliou, P. S. and Gellene, R.: Modification of Parkinsonism-Chronic Treatment with L-Dopa. New Eng. J. Med. 280: 337-345, 1969.

5. Calne, D. B., Stern, G. M. and Laurence, D. R.: L-Dopa in Post Encephalitic Parkinsonism. Lancet 1: 744-747, 1969.

6. Yahr, M. D., Duvoisin, R. C., Schear, M. J., Barrett, R. E., and Hoehn, M. M.: Treatment of Parkinsonism with LevoDopa. Arch. Neurology 21: 343-354, 1969.

7. Calne, D. B., Stern, G. M., Spiers, A. S. D. and Laurence, D. R.: L-Dopa in Idiopathic Parkinsonism. Lancet 2: 973-976, 1969.

8. Tyce, G. M., Muenter, M. D., and Owen, C. A.: Dihydroxyphenylalanine (Dopa) in Plasma during Dopa Treatment of Patients with Parkinson's Disease. Mayo Clin. Proc. 45: 438-443, 1970.

9. Tyce, G. M., Muenter, M. D., and Owen, C. A.: Metabolism of L-Dihydroxyphenylalanine by Patients with Parkinson's Disease. Mayo Clin. Proc. 45: 645-656, 1970.

10. Greer, M. and Williams, C. M.: Dopamine Metabolism in Parkinson's Disease. Neurology 13: 73-76, 1963.

11. Bertler, A., and Rosengren, E.: Possible Role of Brain Dopamine. Pharmacol. Rev. 18: 769-773, 1966.

12. Jenkins, R. B., and Groh, R. H.: Mental Symptoms in Parkinsonian Patients Treated with L-Dopa. Lancet 2: 177-180, 1970.

13. Celesia, G. G. and Barr, A. N.: Psychosis and Other Psychiatric Manifestations of Levo-Dopa Therapy. Arch. Neurol. 23: 193-200, 1970.

14. McDowell, F., et al.: Treatment of Parkinson's Syndrome with L-Dihydroxyphenylalanine (LevoDopa). Ann. Intern Med. 72: 29-35, 1970.

15. Duvoisin, R. C., Yahr, M. D. and Cote, L.: Reversal of the "dopa effect" in Parkinsonism by Pyridoxine. Read before the 94th Annual Meeting of the American Neurological Association, Beverly Hills, California, June 10, 1969.

16. Mendell, J. R., Chase, T. N. and Engel, W. K.: Modification by L-Dopa of a Case of Progressive Supranuclear Palsy. Lancet 1: 593-594, 1970.

17. Brody, J. A., Chase, T. N., and Gordon, E. K.: Depressed Monoamine Catabolite Levels in Cerebrospinal Fluid of Patients with Parkinsonism Dementia of Guam. New Eng. J. Med. 282: 947-949, 1970.

18. Mena, I., Court, J., Fuenzalida, S., Papavasiliou, P. S., and Cotzias, G. C.: Modification of Chronic Manganese Poisoning. New Eng. J. Med. 282: 5-10, 1970.

19. Barbeau, A.: Treatment of Wilson's Disease with L-Dopa after Failure with Penicillamine. Lancet 1: 1180-1181, 1970.

20. Barrett, R. E., Yahr, M. D., and Duvoisin, R. C.: Torsion Dystonia and Spasmodic Torticollis —Results of Treatment with L-Dopa. Neurology 20: 107-112, 1970.

21. Coleman, M.: Preliminary Remarks on the L-Dopa Therapy of Dystonia. Neurology 20: 114-121, 1970.

22. Barbeau, A. and Gillo-Joffroy, L.: Treatment of Parkinson's Disease with L-Dopa and R04-4602. Excerpta Medica International Congress Series No. 193: 171, 1969.

23. Chase, T. N.: Cerebrospinal Fluid Monoamine Metabolites and Peripheral Decarboxylase Inhibitors in Parkinsonism. Neurology 20 (Part 2): 36-40, 1970. (Pharmacologic and Clinical Experiences with LevoDopa: A Symposium).

24. Cotzias, G. C., et al.: Dopamine Analogues For Studies of Parkinsonism. New Eng. J. Med. 283: 1289, 1970.

25. Cotzias, G. C., et al.: Similarities Between Neurologic Effects of L-Dopa and of Apomorphine. New Eng. J. Med. 282: 31-32, 1970.

"Fair," Says Fowle in Times

The doctors' role in health planning is steadily diminishing, Dr. George Himler, president-elect of the 27,000-member Medical Society of the State of New York, told the House of Delegates at the society's annual meeting, according to a New York Times article bylined by Farnsworth Fowle.

The shrinking role, Dr. Himler said, "is in no small part due to our persistent and careful avoidance of involvement in the broad social aspects of health care . . . "We have accepted instead the much narrower responsibility of making recommendations for medical care only, and mostly for the solvent sections of the population."

Dr. Himler added that, "Personally I am convinced that solo and small group practices still have a useful, and perhaps even an essential role to play in our health-care system. But . . . they cannot continue as single, isolated units."

Lessons Learned In Twenty Years Experience In Treating The Chronic Lung Patient At Home With Mechanical Equipment

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

In no other field of medicine is a patient so likely to get improper, ineffective or, in some cases, detrimental and even lethal treatment as in the "home treatment" of the chronic lung patient. The causes are not due to a lack of concern by the physician, but are, instead, due to a lack of understanding by the physician. This article is developed from research, clinical experience, and review of over 10,000 patients treated over a 20 year period and is an attempt to present the pitfalls and some of the corrections that can be made.

First, consider this brief review. When inhalation therapy first started in the late 1940's and early 1950's, the only IPPB equipment available had an initial flow rate of 100 L/min. This caused ineffective delivery and poor results. The literature of this period is proof that hand nebulizers worked better than IPPB machines in asthmatic and chronic lung patients. During this period, and following in its wake, many methods of delivering moisture and medication were developed most of which supported the ego of the designer and prescriber more than it helped the patient. One has only to look at the air tanks, bicycle pumps, etc., that have been developed for this purpose to understand the frustrations that did and still do exist in this field. During the late 1950's better IPPB equipment was developed and more was understood about treatment and a science finally began to evolve that is now known as inhalation therapy.

Since all inhalation therapy, home or otherwise, must have a delivery source this source should be first understood. In order to produce and deliver inhalation therapy one must use air, oxygen or gas mixtures delivered either by pumps or on tanks (central or individual). Air is the best medium where it can be used. In the home treatment equipment, compressed air from tank or by pump, or oxygen by tank are the only available source of inhalation therapy. If oxygen is used in home treatment, there is a potential situation set up in which the patient, already having an elevation in $C0_2$, may with additional oxygen increase the $P0_2$ and thereby produce oxygen apnea and coma. At times this has proved lethal to the home patient who is using his equipment as the doctor ordered. This danger is not present where only compressed tank air or compressors are used. Indeed, it is dangerous to let the home patient have oxygen on the premises. In the hospital when a patient over breathes with IPPB, 2.5-5 per cent $C0_2$ in air or oxygen prevents the side effects usually seen. However, in the home such mixtures should not be used.

Axiom No. 1. In the home only compressed air as a delivery source should be used.

Next, what sources are there for delivering compressed air? Effective compressed air delivery equipment is available for several machines to a hospital full of machines. Where one machine is to run individually, air compressors or a tank of compressed air must be used. Most equipment on the market has to run at 50 PSI and with an unlimited volume flow. Most equipment is designed to run at 100 L/min. The home air

compressors can produce 50 PSI. However, it is difficult to get over 15 L/min. flow. Furthermore, the small air compressors used continually do not continue to function well. Compressors that have been run for a year without repairs will, on the average, deliver 25-32 PSI and will put out about 6-10 L/min. If one is trying to run a machine that has a side-arm nebulizer or a nebulizer which is running continuously it must have 6-30 L/min. to run the nebulizer alone. A compressor will not, therefore, satisfactorily run this type of equipment. The poppet valve and rotating drum that was designed to be flow sensitive at the end of inspiration is also side-arm continuously nebulizing equipment. It is not hard to understand why this type of equipment works so poorly on an air compressor. It is also understandable why the particle size due to poor nebulizer flow is so large as to be ineffective in lung treatment. This equipment, whether run on an external compressor or with a self-contained compressor, has been a major factor for rejection of home inhalation therapy by physicians who do not know not to use this ineffective equipment.

Equipment to be used on an air compressor in the home, then, must (1) work at 30-50 PSI driving pressure, (2) work effectively at 15 L/min. flow. This means that the nebulizer and the machine must be included within these rigid restrictions. There is very little IPPB equipment which meets these requirements. The other equipment must be used with a compressed air tank to get sufficient volume flow to effectively work. Compressors must be checked frequently.

The lack of understanding of IPPB equipment and the resultant poor choosing of home equipment and compressors has lead to the development of a second type of compressor equipment. Since a nebulizer can be driven by a compressor at 20-30 PSI and 6-10 L/min. some compressors are useful and more effective in medication delivery with nebulizers than they are trying to push a high flow rate side-arm nebulizer machine. This has lead to denunciation of potentially good IPPB equipment because of some bad IPPB equipment and has caused a return to a variety of gadgets all of which are bad for inhalation therapy. Why are the compressor-driven nebulizers more effective than the side-arm IPPB machine? This is because the compressor flow rate is sufficient to drive a nebulizer. The patient chooses his own flow rate which carries the better nebulized spray into the lungs. The big drawback here is that spray is only delivered to normally ventilated areas of the lungs. It cannot get into the areas not ventilated. This is, therefore, poor treatment in localized or obstructive diseases where good IPPB equipment will do much better. Compressor-driven machine ineffectiveness is the reason that, as a rule, treatment in the hospital is better and more effective than treatment with home equipment. Over a period compressors decrease in both pressure and flow volume and this results in poor treatments.

Axiom No. 2. Home equipment must run effectively on compressors, otherwise compressed air in a tank must be used. Compressors must be maintained.

What are the dangers other than ineffective delivery? Infection and oil are two major hazards. First, consider the oil. All compressors must be lubricated. Compression occurs and small droplets of oil are deposited in the air which, if not filtered out are deposited in the alveolus. To filter, however, causes some drop in pressure due to the resistance in the filter mechanism. This will not be gone into further here.

Infection from breathing equipment is well known. Many articles have been written about it. It can be summarized that: moisture in equipment is a source of Gram negative infection (Pseudomonas, Aerobacter, Klebsiella). Equipment used to produce and deliver moisture should be sterilized at least every 24 hours to maintain sterilization. Misters and nebulizers (humidifiers) that

cannot be sterilized are a source of infection and are dangerous to the patient.

When air is compressed by any means, water is liquified from the air. This occurs because water in the air as humidity is in vapor form and is liquified in the process of compression. All IPPB equipment must be run not only at pressure and flow rate that are sufficient otherwise but also must be run by completely dry air. Therefore, the moisture must be filtered out as well as the oil before driving the IPPB equipment. This is obviously more of a problem where or when humidity is high than when humidity is low. There is a difference in using equipment at the seashore and in a desert. Compressor driven nebulizers often do not have filters and are very dangerous from the oil and machine moisture and infection standpoint. The pressure and flow volume must be adequate after cleaning and drying. If the patient does not keep his equipment absolutely dry and sterile, then this is a dangerous source of infection and a big cause of machine malfunction. Breathing equipment, unlike steam pots, produces moisture that is delivered directly into the lungs. The routine passage of bacteria into the lungs is made difficult by the nose and air flow pattern which are bypassed by the breathing equipment. This makes breathing equipment infections likely if proper sterilization precautions are not carried out all the time. Since compressors are always producing moisture and cannot be sterilized, compressors used with nebulizers are the most dangerous source of, and most frequent cause of, Gram negative infection where used. Cotton plugs or filters must be changed between each treatment if they are to be used. Permanent filters soon become dirty and infectious.

Probably the worst problem with the patients who have home equipment is that, after a period of time and not realizing the danger of infection, they do not keep their equipment sterile or clean. Any one who has had any experience with home treatment equipment will attest to the lack of proper cleaning and equipment care. The only way noted thus far to insure halfway good care is to not only issue complete instructions but also to insist on repeated and frequent checks of equipment and patient. This must be done at least every month that the equipment is in use.

Axiom No. 3. Where home equipment is being used the equipment must be checked and the patient re-instructed at least every month.

The opponents of home breathing equipment will at this point be quick to point out that with either nebulizers or IPPB home units this danger of infection occurs between the inspection periods and this is true. However, there does not appear to be that many infections in breathing equipment in home use. Is this really a problem, then? Yes, this is really a problem. Some of the reasons why more infections are not seen are multiple and will be presented.

Some equipment seems to get better results with Isoproterenol than with Racemic Epinephrine. In general, though, the equipment that delivers best gets better results with Racemic Epinephrine. The physicians who do not use home equipment, as a rule, have tried equipment that is not as effective as hand sprays. They have not tried other equipment because of the many rather stupid statements that all IPPB machines are the same and the difference is the number of knobs for the patient to manipulate. This, of course, is the absurd statement of the century. Such statements are made out of educated ignorance, not out of full knowledge. If one does not know enough to know the difference in equipment, he does not know enough to prescribe treatment.

Physicians who do prescribe IPPB for home use are divided as previously stated. As a result of their general influence there are two groups. (1) There are those who use high initial flow rate side-arm and/or mainstream continuously nebulizing equipment and (2) those that use only flow-rate controllable inspiratory nebulizing only

equipment. The side-arm continuously nebulizing equipment proponents use Isoproterenol and do not like Racemic Epinephrine. The users of the flow-rate controllable inspiratory only nebulizing equipment are proponents of Racemic Epinephrine and do not routinely use Isoproterenol. To digress farther on this important and little understood subject, this is due to the difference in Isoproterenol and Racemic Epinephrine. Isoproterenol will give as good results in pulmonary function testing if sprayed into the mouth with the breath being held, taken orally or placed under the tongue as it will breathed into the upper lungs. Racemic Epinephrine will not give as good results if sprayed in the mouth the breath being held, placed under the tongue or taken orally as it will delivered into the lungs. Racemic Epinephrine will not give the results Isoproterenol will in the high flow rate side-arm continuously nebulizing equipment. Isoproterenol will not give the results that Racemic Epinephrine will in flow rate controllable inspiratory only nebulizing equipment. Equipment that delivers Racemic Epinephrine best will give improvement after equipment using Isoproterenol has been used. The opposite is not so, however. One reason for the apparent paradox is that (1) Racemic Epinephrine is a bronchodilator and a vasoconstrictor. (2) Isoproterenol is a bronchodilator but is also a vaso-dilator. (3) Racemic Epinephrine will reverse the vaso-dilator effect of Isoproterenol. Racemic Epinephrine will constrict the vasculature of the tracheobronchial tree which has been dilated by Isoproterenol, thus increasing the airway after Isoproterenol has been used. Isoproterenol will not, however, do anything following Racemic Epinephrine. Racemic Epinephrine is destroyed rapidly in the body as are other catecholamines produced in the body and considerable doses can safely be delivered into the lungs. Isoproterenol has to be detoxified more slowly by the body and lasts much longer. Thus, higher and more toxic levels are developed when comparable doses are used. A practical evaluation of this is done with the use of a flow rate controllable inspiratory nebulizing only equipment which delivers Racemic Epinephrine, and also Isoproterenol, as well as or better than the other types of equipment. If Racemic Epinephrine is used every 30 minutes for two or three hours, pulmonary function improves to maximum with the first treatment and remains so or improves to a maximum and then remains so. When Isoproterenol is so used with the first treatment there is improvement but then, with subsequent treatment, function gets worse. This is due apparently to the fact that, with the first treatment, there is produced maximum bronchodilation and then, with subsequent treatments, there is progressive vaso-dilation with submucosal vascular engorgement and encroachment on the airway. The side-arm high flow rate continuously nebulizing equipment will not duplicate this. This digression from infection and sterilization was necessary before proceeding with further discussion of these problems. Using a machine contaminated with Gram-negative organisms no positive cultures were obtained where 20 per cent ethinol solution and 12½ mgm/cc aminophyllin solutions were used. All other combinations of solutions were found to pass and carry positive cultures. Where water, saline, etc., is used there may be Gram-negative infections as a result. Ethinol solutions have been run down recently because solutions of 20 per cent ethinol and isoproterenol are not as effective as solutions of water or saline and isoproterenol. Thus, ethinol solutions are being run down by the proponents of isoproterenol and high flow rate side arm continuously nebulizing equipment. Infections are more often seen from this type of equipment.

Axiom No. 4. Only 20 per cent ethinol solution or 12½ mgm/cc aminophyllin solutions should be used in IPPB equipment to keep infection down.

Axiom No. 5. Only racemic epinephrine solutions should be used in IPPB equipment. Isoproterenol should only be used orally.

Most chronic lung patients are or should be on bronchodilators and expectorants in addition to the mechanical home equipment. Common expectorants are saturated solutions of potassium iodine or organidine, glyceryl guaiacolate or Ammonia Chloride. Where the iodine solutions are used in sufficient amount (25 to 30 drops, four times a day), antibiotics can be used much more frequently without gram negative or fungus growth. It appears that this is an added precaution where mechanical equipment is to be used in the home. Mechanical equipment infections are not seen where iodine solutions are used in doses of 25 to 30 drops, four times a day. They are seen where iodine is not used, or is not used in sufficient amount. (Under 20 drops, q.i.d. is not good.) Iodine has been much maligned. If iodine solutions are started at very low levels and built up slow enough every patient can be taken to 30 drops, four times a day. The increased bronchorrhea produced thereby, protect against infections, and also prevents the bronchospasm and hyperemia that occurs as a result of sudden change in humidity that the lungs have trouble adjusting to otherwise.

Axiom No. 6. Iodine solutions in sufficient amounts (25 to 30 drops, four times a day) should be used along with home mechanical equipment.

Other medications are in order for the chronic lung patient. If the normal individual is tested by pulmonary function, then if they are tested after exposure it is found that with exposure to dry air, smoke, particularly cigarette smoke, odors, moderate changes in temperature, and spray whether from IPPB equipment or anything else there develops bronchospasms. This is demonstrated by a reduction of 10-20 per cent or more in pulmonary functions. This change is greater in the chronic lung patient, asthmatic, chronic bronchitic, emphysema, and stiff lungs.

The patient with chronic lung disease who shows reduction in functions on IPPB sprays as well as other stimulants will show no such change if the patient is on bronchodilators (ephedrine and aminophyllin combinations). When this is given routinally the periodic sub-clinical or clinical bouts of bronchospasms due to climate, temperature, humidity, odors, IPPB, etc., will not occur. Even in the normal the reduction of these functions can be prevented by use of bronchodilators.

Axiom No. 7. Patients with chronic lung disease should be on not only iodine solutions but should also be on routine bronchodilator therapy for the best results.

Solutions for inhalation therapy at home alluded to previously deserved a more complete discussion. The patient was protected from harm to a great degree by some of the older solutions. Alevair which has been removed from the market, usually used with isoproterenol protected the patient by being so ineffective. It had such high cohesive forces that it kept drugs and infections from getting any farther than the tracheal bifurcation. It caused cough by tracheal irritations and was immediately removed with all the water it could absorb from the tracheobronchial tree. Thus, it was as effective as causing a cough by putting a catheter in the trachea.

Water is a better vehicle; however, it will denature surfactant if delivered to that level, and is no barrier to infection. In the emphysematous patient the high surface tension with the high positive pressure forces of breathing are more apt to collapse ventilated areas than other forms of treatment.

Saline, if used as normal saline, as particle dedrigidation due to molecular escape occurs to keep up humidity produces concentration of the salt solution (this occurs with all solutions except the now obsolete alevair which takes up water). The hypertonic saline delivered causes some degree of irritation which acts as a better media for infection. In the acute bronchitic it is noted that the irritation of the salt solutions (if normal saline is used in the nebulizer) causes a retarding

of the patient's recovery period which is doubled the time if water or 20 per cent ethinol are used instead. If one is determined to use saline then ¼ per cent normal saline (which will rise in concentration to normal saline by the time of peripheral delivery) should be used for the patient's sake.

Ethinol and water started from the experiences with 70 per cent alcohol in acute pulmonary edema. Where the lungs are stiff from secretions or edema it is effective. It has a low surface tension which improves function in the alveolar area. It has the effect of improving elasticity of the blobs in the emphysemous patient. In fact there is no condition in the lungs that is not improved to some extent by 20 per cent ethinol solutions. Also it appears to have a definite advantage where infection is a possibility.

Aminophyllin is a bronchodilator and vaso-dilator when used with racemic epinephrine, the vaso-dilator effects are blocked. This combination acts the same as the ephedrine and aminophyllin combination that is used by the oral route. This is most effective in the patient that cannot take medication by mouth or who will not take this combination by mouth. In addition the pH of this mixture is about 8.5 and this counteracts the effects of the acidosis that is usually seen in so called Adrenalin fastness and causes the catecholamines to again be effective. In addition to the optional pH changes it also apparently helped to keep down infection.

Other solutions are used in IPPB machines but are not recommended for and should not be used in the home situation. Many patients are treated with hand sprays which are mechanical equipment. The medication in the Freonized can of hand sprays are Isoproterenol, or isoproterenol and phenylephrine and racemic epinephrine. This seemingly innocuous form of self medication is the most dangerous in all of medicine. The most popular forms of treatment are those with isoproterenol and phenylephrine HCI. The results with isoproterenol were poor and the marked vaso-dilation produced by this form of treatment made the patient worse. The phenylephrine was added to counteract this. Now the effects of isoproterenol last for four hours. The vaso-constrictic efforts of phenylephrine lasts only an hour or so and then is followed by a rebound vaso-dilation that augments the vaso-dilator effect of the isoproterenol. Thus, there is marked vascular engorgement with this type medication. Where used less than every four hours this is to some extent effective though not the best form of therapy. The patient will not respect the dangers however. Over and above the pulmonary and cardiac effects isoproterenol produces an apparent euphoria effect like that of the amphetamines. The patient who used hand sprays frequently as he uses them when in trouble showed progressive deterioration of pulmonary function during this test period. Using isoproterenol every 15 minutes over a continuous period showed reduction in function due to peribronchial vascular engorgement. If used longer than one hour changes are more rapid and more severe where isoproterenol and phenylephrine were used together. If isoproterenol is needed as an adjunct to treatment, then it should be used sublingually or orally. Isoproterenol also paralyzes the cilliary mucous esculator and stops its effective action. It appears the patient who uses isoproterenol has an amphetamine type addicting situation. When he gets into trouble though his functions get worse he continues to use it more frequently every time. The most common cause of death in the chronic lung patient is due to over dosage of Isoproterenol. This is usually missed and not diagnosed by the prescribing physician, the cause of death being attributed to the disease rather than to the Isoproterenol over dosage as it should be. Family members of the Isoproterenol users also volunteer the information that when the patient is using the Isoproterenol he is a different person. This is not noted when the patient is using Racemic Epinephrine. Racemic Epinephrine used in hand sprays affects the patient differently. When the patient is getting no effect he will leave off and search for help. Over dosage is rare. If hand

sprays must be used Racemic Epinephrine is the safest.

Axiom No. 8. If hand sprays or freonized sprays are to be used only Racemic Epinephrine should be used.

The frequency of treatments should be discussed. There is an increasing number of one to two treatments a day clinics developing throughout the width and breadth of the country. The individual who needs only one treatment a day is not on a good medication routine or he would need no treatments. The individual who needs IPPB continuously, whether for bronchitis, stiff lungs, emphysema, heart failures, etc., should require a minimum of three treatments a day. One on getting up to aid the bronchial toilet, one mid-afternoon, then one at bed time to give maximum relief at night. Where ethinol and water and Racemic Epinephrine or Aminophyllin and water 12½ mg/cc. and Racemic Epinephrine is used treatments may be given every hour. Isoproterenol should not be used more often than every four to six hours. The big advantage of home treatment over and above there being no substitute is that with development of upper respiratory systematology frequent treatments can prevent repeated hospitalizations.

Axiom No. 9. When home treatment must be resorted to, to be effective, it should be used a minimum of three times a day.

SUMMARY:

The following 11 axioms were set forth, nine were discussed and the last two are self evident. They should be followed for the best results with home treatment of the chronic lung patient, for protection of the patient from infections, physiologic death traps produced by the wrong equipment.

Axiom No. 1—Only compressed air should be used in the home to drive mechanical equipment.

Axiom No. 2—Home equipment must run effectively on compressors.

Axiom No. 3—Where home equipment is being used in the home it must be checked at least every month and the patient re-instructed in sterilization.

Axiom No. 4—Only 20% ethinol and 12½ mgm. aminophyllin solutions should be used in the home.

Axiom No. 5—Only Racemic Epinephrine should be used in the nebulizer solutions.

Axiom No. 6—All patients on mechanical equipment should be on iodine solutions in sufficient amounts.

Axiom No. 7—All patients should be on bronchodilator therapy.

Axiom No. 8—If hand spray or freonized sprays must be used only Racemic Epinephrine should be used.

Axiom No. 9—When home treatment must be resorted to, to be effective it should be used a minimum of three times a day.

Axiom No. 10—All home patients mechanically treated should be re-evaluated frequently.

Axiom No. 11—Breathing instructions and physical therapy aimed at rehabilitation are a must in the home treated patient.

The Gold-Headed Cane

The craving for magic and authority which is inherent in us all, especially when we are ill, has undoubtedly helped the doctor in the treatment of the patient. The gold-headed cane of the physician of the past became his rod of Aesculapius and a powerful weapon. In no other way can I account for the fact that at a time when medical science has been advancing at a rate previously unknown, there is more scepticism and doubt as to the value of the services we render than ever before. Our patients may like us as individuals, but as a profession we have a "bad press." —Sir Walter Langdon-Brown

Community Mental Health Demonstration Project

Veterans Administration Hospital

Tuscaloosa, Alabama

The Tuscaloosa Veterans Administration Hospital has been designated to develop the nation's first VA Community Mental Health Program. The Community Mental Health Demonstration Project is designed to extend the services of the hospital to the veteran, his family, and community in cooperation with local resources for purposes of providing improved treatment and preventing unnecessary hospitalization. Many hospitalizations can be prevented through the use of resources where they exist or supplementing services that are lacking in the community.

The treatment philosophy of the hospital is based on the belief that no mental patient is hopeless and that the hospital is not a home or natural habitat for man. A multidisciplinary team approach, utilizing an Attitude Therapy and Reality Orientation treatment program, is an effective method of treatment delivery. The Community Mental Health Demonstration Project will provide the opportunity of using this approach in the Community.

The Project, which officially began January 1, 1971, is expected to receive a total funding of almost three million dollars from the VA Central Office.

The primary objectives of the Project are:

(1) Prevention of Hospitalization

(2) Assisting in patient readjustment to community following hospitalization

(3) Extend United States Veterans Assistance Center Program (Information regarding VA benefits)

(4) Strengthen Community Volunteer Program

(5) Coordinate and supplement, when necessary, community services including comprehensive community mental health centers, and other federal, state and local programs

(6) Stimulate community concern and activity in the area of mental illness and mental health services

(7) Project to serve as proving ground for development of procedures and policies for all VA neuropsychiatric hospitals in the area of delivery of mental health services to veterans in the community

PROJECT IMPLEMENTATION

The forty-two county primary catchment area of the hospital has been divided among the four psychiatric treatment units in the hospital. Initial funding is available for mobilizing two treatment units between January 1, and June 30, 1971. As a method of phasing in the project, Unit 40, which serves the fifteen northwestern counties, including Lauderdale, Colbert, Limestone, Lawrence, Morgan, Franklin, Marion, Winston, Cullman, Walker, Fayette, Lamar, Pickens, Tuscaloosa, and Bibb, was selected as the first treatment team to be mobilized. The activities of this team and the Core Project Staff, which includes a Coordinator, Administrative Assistant, Researcher, and Secretary, have led to many community contacts with local public and private agencies as well as community leaders. The treatment team has been well received by the community. The response can best be measured by the active involvement of the community and the increasing number of requests for services which are being made from various agencies and individuals.

As a means of continuing the development

(Continued on Page 731)

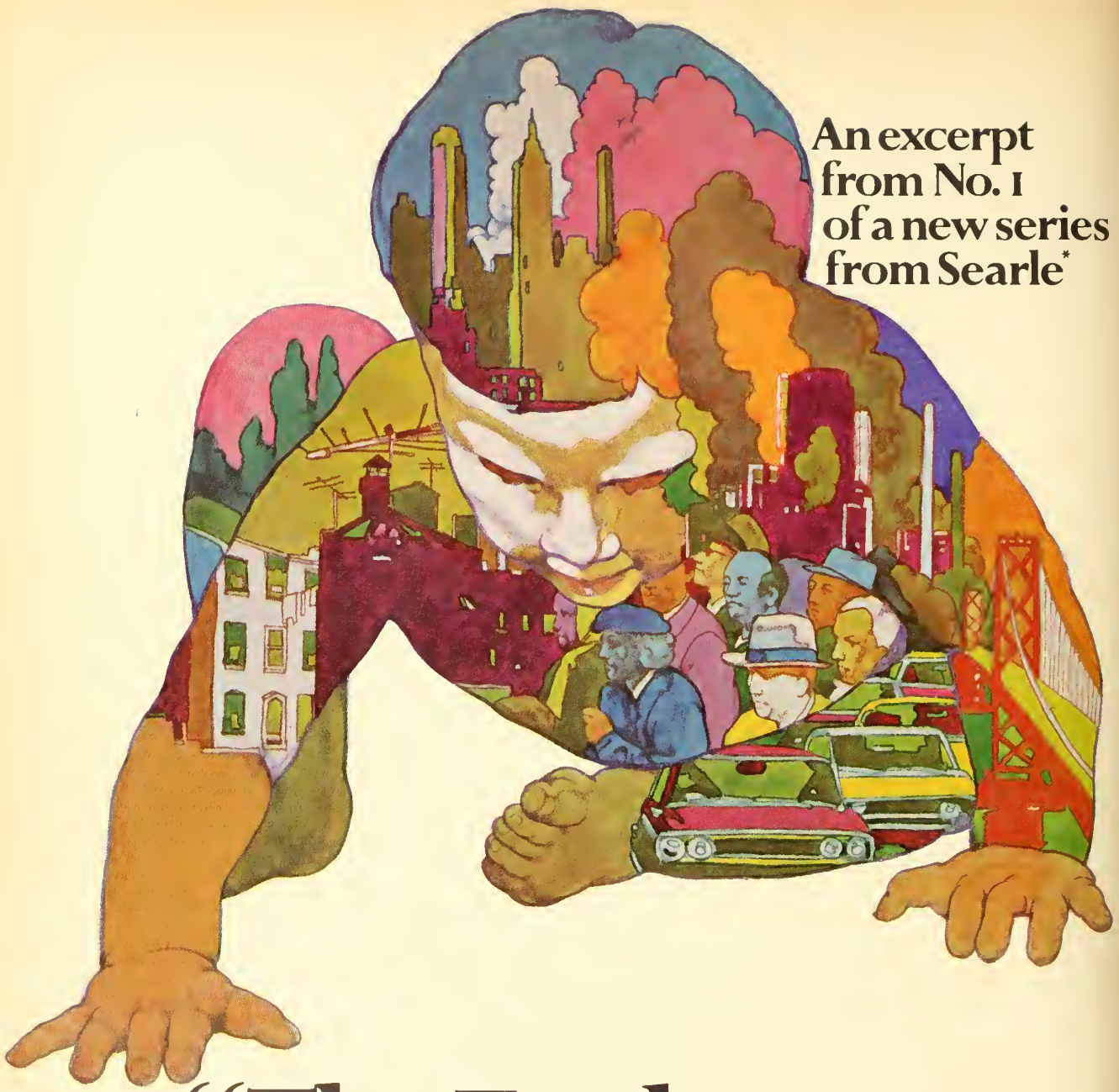
CALORIES / 7 oz. Serving*

Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell



An excerpt from No. 1 of a new series from Searle*

"The Ecology of Birth Control"

75 million more Americans—what impact on health care?

Because of a declining birthrate in the United States—attributable in no small measure to the widespread use of contraceptives—our population in thirty years is expected to be *only* 280 million, while the world population is expected to double, reaching 7 billion.

But the word "only" has an ironic ring to ecologists who warn of cities resembling overcrowded, contaminated rat colonies, of respiratory and mental diseases reaching epidemic proportions and of a health-care community virtually overwhelmed by the burden.

The global consequences may be no less devastating. Ecologists estimate that every American has roughly fifty times the negative impact on the Earth's life-support systems of, say, a citizen of India. In these terms, adding 75 million Americans would be equivalent to adding 3.7 billion Indians to the world population.

**For the complete brochure, and others in the series as they appear, please write to Searle or ask your Searle representative.* Explored in the forthcoming issues will be the role of birth control on family pressures and its effects on the family; the influences of poverty, ethnic factors and marital status; its role in illness, its genetic implications and its effects on the emotional and behavioral life of the individual.

An original contribution to the science of contraception

Dem/ulen®

ach tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Demulen...for low estrogen and Searle's progestin...with ts unsurpassed contraceptive effectiveness and low in- cidence of side effects...with simple "Sunday-starting" and patient-proof Compack® tablet dispenser.

Actions – Demulen acts to prevent ovulation by inhibiting the output of go- adotropins from the pituitary gland. Demulen depresses the output of both he follicle-stimulating hormone (FHS) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States ince 1960. Reported pregnancy rates vary from product to product. The ef- ectiveness of the sequential products appears to be somewhat lower than that f the combination products. Both types provide almost completely effective ontraception.

An increased risk of thromboembolic disease associated with the use of ormonal contraceptives has now been shown in studies conducted in both reat Britain and the United States. Other risks, such as those of elevated lood pressure, liver disease and reduced tolerance to carbohydrates, have ot been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in sub- rimate animal species in multiples of the human dose increases the frequency f some animal carcinomas. These data cannot be transposed directly to man. he possible carcinogenicity due to the estrogens can be neither affirmed nor efuted at this time. Close clinical surveillance of all women taking oral con- raceptives must be continued.

Indication – Demulen is indicated for oral contraception.

Contraindications – Patients with thrombophlebitis, thromboembolic disor- ers, cerebral apoplexy or a past history of these conditions, markedly im- aired liver function, known or suspected carcinoma of the breast, known or uspected estrogen-dependent neoplasia and undiagnosed abnormal genital leeding.

Warnings – The physician should be alert to the earliest manifestations of hrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary mbolism and retinal thrombosis). Should any of these occur or be suspected he drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain nd studies of morbidity in the United States have shown a statistically sig- ificant association between thrombophlebitis, pulmonary embolism, and erebral thrombosis and embolism and the use of oral contraceptives. There ave been three principal studies in Britain [1-3] leading to this conclusion, and ne[4] in this country. The estimate of the relative risk of thromboembolism in he study by Vessey and Doll[3] was about sevenfold, while Sartwell and asso- iates[4] in the United States found a relative risk of 4.4, meaning that the users re several times as likely to undergo thromboembolic disease without evident ause as nonusers. The American study also indicated that the risk did not ersist after discontinuation of administration, and that it was not enhanced y long-continued administration. The American study was not designed to valuate a difference between products. However, the study suggested that here might be an increased risk of thromboembolic disease in users of se- uential products. This risk cannot be quantitated, and further studies to con- irm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or omplete loss of vision, or if there is a sudden onset of proptosis, diplopia or igraine. If examination reveals papilledema or retinal vascular lesions medi- ation should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is ecommended that for any patient who has missed two consecutive periods regnancy should be ruled out before continuing the contraceptive regimen. f the patient has not adhered to the prescribed schedule the possibility of regnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been dentified in the milk of mothers receiving these drugs. The long-range effect o the nursing infant cannot be determined at this time.

Precautions – The pretreatment and periodic physical examinations should nclude special reference to the breasts and pelvic organs, including Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is rec- ommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, re- quire careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In un- diagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of con- traceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives – A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reac- tions: neuro-ocular lesions, e. g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (in- crease or decrease), changes in cervical erosion and cervical secretions, sup- pression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted; anovula- tion post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, back- ache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contra- ceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X, thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol deter- mination.

References: **1**. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. **3**. Vessey, M. P., and Doll, R.: In- vestigation of Relation Between Use of Oral Contraceptives and Thromboem- bolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Throm- boembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969.

1A2

SEARLE Where "The Pill" Began

G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS

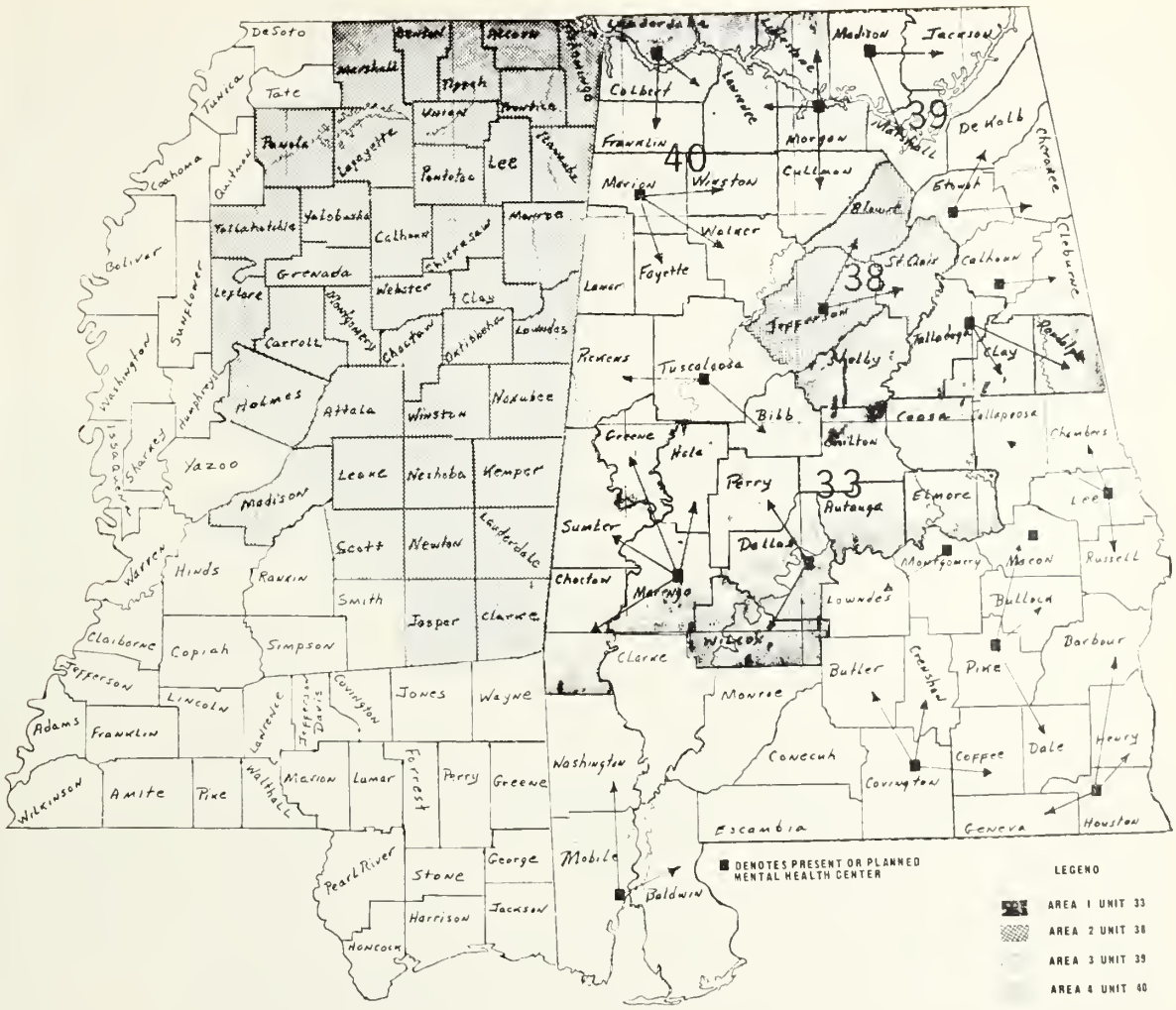
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

(Continued from Page 726)



of the Project, the Unit 39 team serving the eight northeastern counties, including Madison, Jackson, Marshall, DeKalb, Etowah, Cherokee, Calhoun, Cleburne, will become active in April 1971. After July 1971, funds are expected to become available for systematic extension of the program into areas served by Unit 38, serving Jefferson, Blount, and St. Clair counties and Unit 33, serving sixteen counties in Central Alabama.

SUMMARY

The Community Mental Health Demonstration Project is in the early development stages. However, the reactions of staff, community and patients and their families indicates that it will be well established as an improved approach in delivery of mental health services.

Costly Procrastination

An osteopath's failure to notify his insurer of a possible malpractice claim barred coverage of the claim under his professional liability policy, the Supreme Court of Oregon ruled. Similarly, the insurer properly refused to defend the malpractice action because of lack of notice.

Treated by the osteopath in Oregon after an automobile accident, the patient went to California and, still suffering, went to a physician. "A major fracture of the cervical spine" was the diagnosis. Advised of it the osteopath failed to advise the insurer.

Later the osteopath contended that the fracture must have occurred in a later accident.

—The Journal, Kansas Medical Society

around the state

Pictorial Highlights of 110th Annual Session

Wednesday-Saturday, 14-17 April 1971

MASA In Birmingham

M (for Meetings and Merriment)

(1) At Jefferson County Society Party; from left: Dr. John M. Chenault, chairman, MASA Board of Censors; Mrs. Bornemeier, wife of AMA President Dr. Walter C. Bornemeier; Mrs. Chenault, Past President, AMA Auxiliary, member of AMPAC Board of Directors; Dr. Bornemeier.

(2) Mercer Helms of Montgomery, magician, party entertainer.

(3) - (4) - (5) - (7) - (8) - (9) - Scenes from dance floor and tables at Jefferson Party.

(6) Mrs. Howard C. Johnson of Sheffield, outgoing WAMASA President, and Washington Political Satirist Mark Russel, who made the principal and mirthful address at the annual WAMASA luncheon.

Pictorial Highlights of 110th Annual Session

Wednesday-Saturday, 14-17 April 1971

A (for Activities, ALAPAC)

(1) Prominent at ALAPAC luncheon, from left: James W. Foristel, Washington, principal speaker; Dr. Grover C. Murchison, Jr., chairman, ALAPAC Board; Dr. Hoyt D. Gardner, chairman, AMPAC Board, Louisville; Dr. Ira L. Myers, State Health Officer; Dr. Max McLaughlin, Mobile, 1st District Director, ALAPAC Board.

(2) ALAPAC speakers table, from left: Dr. Ellis F. Porch, Arab, 7th District Director, whose home county, Marshall, has only 100% ALAPAC membership in State; Dr. Frank M. Phillippi, Brewton, former ALAPAC director, new MASA President-elect; the Rev. Dr. A. Ben Oliver, First Baptist Church, Birmingham.

(3) J. F. Hensleigh, M.D., a new MASA member, looking over Orientation material.

(4) Clifton K. Meador, M.D., Dean, University of Alabama School of Medicine, receiving 1971 check from Mrs. Ben Johnson, Jr., Bessemer, as Alabama's AMA-ERF chairman. Mrs. Johnson, a past president of WAMASA, represents the Woman's Division on the ALAPAC Board.

(5) State Senator Roland Cooper, Camden, recipient of ALAPAC's first plaque of appreciation, awarded for his legislative contributions to the health and welfare of the people of Alabama. Crescented around him, from left: Drs. O. Emfinger, outgoing MASA president; Robert Parker, Montgomery; E. L. Strandell, Brewton; Paul W. Burleson, Birmingham, and John M. Chenault, Decatur.

(6) At ALAPAC speakers table, from left: Dr. William L. Smith, MASA Secretary-Treasurer; Dr. Ira L. Myers, State Health Officer; Alabama senior U. S. Senator John Sparkman.

(7) Dr. Luther Terry, native Alabamian, former U. S. Surgeon General, Jerome Cochran Lecturer.

(8) From left: Dr. Gardner, AMPAC chairman; Dr. Chenault, Board of Censors chairman; Mrs. Chenault, past president, AMA Auxiliary.

(9) Dr. Thomas, Dr. McLaughlin, Dr. John Sullivan, ALAPAC Secretary-Treasurer; L. P. Patterson, Executive Director, MASA.

Pictorial Highlights of 110th Annual Session

Wednesday-Saturday, 14-17 April 1971

S (for Speakers, Scientific Sessions)

(1) Thomas Bowen Hill, Jr., Montgomery attorney, who spoke on "How to Avoid a Malpractice Suit" at the MASA meeting in Birmingham, with his brother, Dr. Luther L. Hill, member of the Board of Censors.

(2) President Dr. Emfinger with James L. Williams, Birmingham, special agent, Federal Bureau of Narcotics and Dangerous Drugs.

(3) Incoming President Dr. Archie E. Thomas, Montgomery.

(4) Dr. Ira L. Myers, Montgomery, State Health Officer, with Dr. Walter C. Bornemeier, AMA President.

(5) At a Scientific Session.

(6) Dr. Walter F. Scott, Jr., Birmingham, President, Jefferson County Medical Society.

(7) At registration desk for Counsellors and Delegates, in lobby of Parliament House.

(8) Mrs. R. C. L. Robertson, president, Woman's Auxiliary, AMA; Mrs. J. Ramsey Moore, president, Auxiliary, Southern Medical Association; Mrs. Howard C. Johnson, out-going president, WAMASA.

(9) Mrs. Robertson and Mark Russell, WAMASA speaker.

— 0 —

Pictorial Highlights of 110th Annual Session

Wednesday-Saturday, 14-17 April 1971

A (for Awards, Acknowledgements)

(1) Alabama Chief Justice Howell T. Heflin, Awards dinner speaker.

(2) Looking from Speakers table, general view of Awards dinner guests.

(3) Association President Dr. O. Emfinger holding Samuel Buford Word plaque awarded "for outstanding service to humanity beyond professional duty," standing between Mrs. Word and Mrs. Edward Lee Trammell, who received the plaque awarded posthumously to her husband.

(4) Mrs. Sylvia Hart, recipient, Douglas L. Cannon news-reporter award, annual recognition for scientific reporting in a city of more than 20,000; and Dr. E. W. Stevenson, chairman, Committee on Public Relations.

(5) Section of Awards Dinner speakers table.

(6) Four taking oath of office to which they were elected, from left: President Dr. A. E. Thomas; Drs. E. L. Strandell of Brewton and Paul W. Burleson, Birmingham, re-elected to MASA Board of Censors; President-elect Frank M. Phillippi, Jr., Brewton.

(7) Dr. Buris R. Boshell, the Ruth Lawson Hanson Professor of Medicine in Diabetes and Metabolism, University of Alabama School of Medicine, with Mrs. Hanson, who received the William Crawford Gorgas Award "for outstanding service by a layman in the field of health."

(8) David W. Williams, recipient of Douglas L. Cannon news-reporter award, for reporting in a city under 20,000.

(9) Mr. William T. Garrison, R. S., recipient of William Henry Sanders Award.

—0—

They all have two things in common: they have monilial vaginitis;

CANDEPTIN now gives you complete therapeutic flexibility.

It is the specific high potency antimonilial agent which provides superior effectiveness. And there is at least one dosage form to meet every patient's individual needs and/or preference.

CANDEPTIN – more advantages for your patients...

It's fast–prompt symptomatic relief of itching, burning, candidiasis discharge and malodor in 48-72 hours; usually cures completely in a single 14-day course of therapy.

It's safe–no side effects, clinical reports of irritation or sensitization have been extremely rare; exact dosage can be assured.[5,6]

It's convenient–easy to use in all forms, encourages patient acceptance and cooperation; therapy can be started in your office.

It's clinically proven–Candicidin is significantly more potent in vitro than nystatin,[1] and has a record of cure rates of 90% and more in pregnant and non-pregnant patients.[2,3,4] In two recent studies, both involving gravid and non-gravid patients, a 100% culture-confirmed cure rate was achieved with 14 days of therapy.[5,6]

CANDEPTIN (candicidin) Vaginal Tablets, Vaginal Ointment, and . . . new VAGELETTES™

Now Vagelettes offer a unique new dosage form–candicidin ointment in a soft gelatin capsule – for virtually unlimited application. With Candeptin in three forms, your range of therapy has been extended to meet even those previously difficult-to-treat Candida cases.

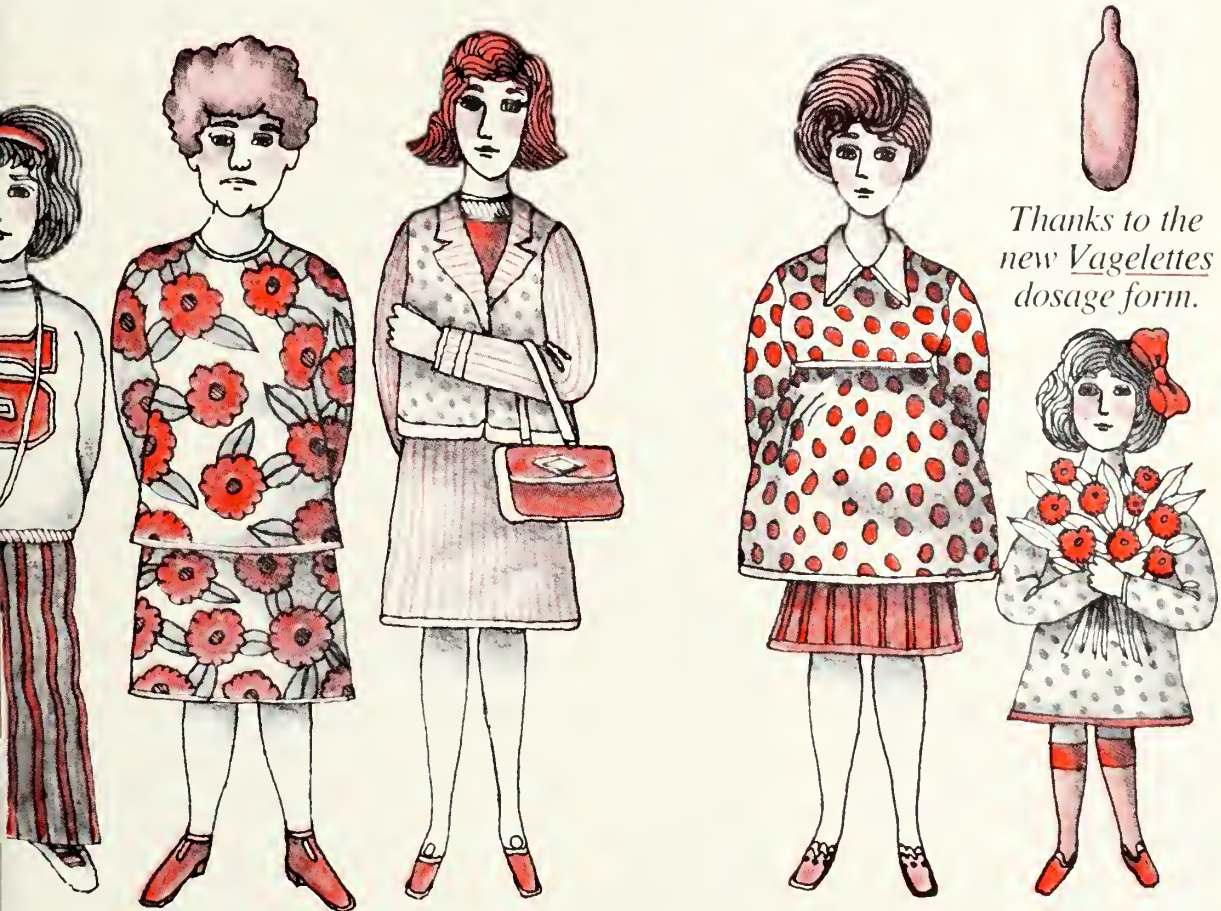
☐ For the young patient–cut off the tip of the narrow soft end of the Candeptin Vagelette and extrude contents through the intact hymen.

☐ For the gravid patient–easy manual insertion without the need for an applicator or inserter for intravaginal use.

☐ For the multiple needs of all your patients–topical application for labial involvement, intravaginal use to treat mucosal infestation.

References: 1. Lechevalier, H.: Antibiotics Annual 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. 2. Olsen, J.R.: Journal-Lancet *85*:287 (July) 1965. 3. Giorlando, S.W., Torres, J.F., and Muscillo, G.: Am. J. Obst. & Gynec. *90*:370 (Oct. 1) 1964. 4. Friedel, H.J.: Maryland M.J., *15*:36 (Feb.) 1966. 5. Giorlando, S.W.: to be published 1971. 6. Decker, A.: Case Reports on File, Medical Department, Julius Schmid.

ey can now be cured with Candeptin. Even these two.



NDEPTIN®
licidin Vaginal Tablets, Ointment, VAGELETTES™

ription: Candeptin (candicidin) Vaginal Ointment contains persion of candicidin powder equivalent to 0.6 mg. per gm. 06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Can- in is contained in 5 gm. of ointment or one applicatorful. leptin Vaginal Tablets contain Candicidin powder equiva- to 3 mg. (0.3%) Candicidin activity dispersed in starch, se and magnesium stearate. Candeptin Vagelettes contain 3 of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.

on: Candeptin Vaginal Ointment, Vaginal Tablets and Vagel- possess anti-monilial activity.

ations: Vaginitis due to *Candida albicans* and other candida es.

raindications: Contraindicated for patients known to be tive to any of its components. During pregnancy manual et or Vagelette insertion may be preferred since the use of intment applicator or tablet inserter may be contraindicated.

ion: During treatment it is recommended that the patient re- from sexual intercourse or the husband wear a condom to l re-infection.

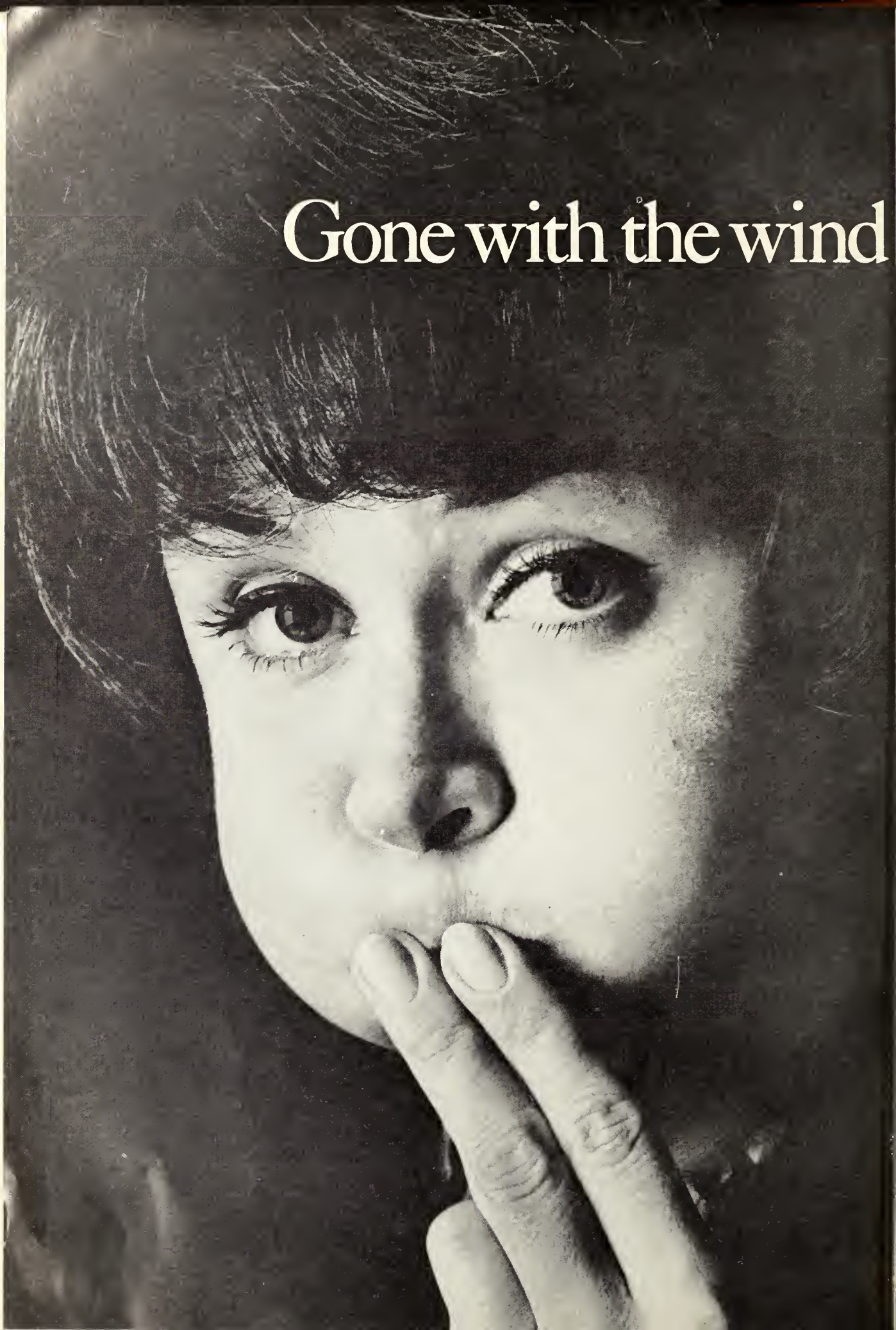
rse Reaction: Clinical reports of sensitization or temporary tion with Candeptin Vaginal Ointment, Vaginal Tablets or lettes have been extremely rare.

ge: One vaginal applicatorful of Candeptin Ointment or Vaginal Tablet or one Vagelette is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Available Dosage Forms: Candeptin Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). Candeptin Vaginal Tablets are packaged in boxes of 28, in foil with inserter — enough for a full course of treatment. Candeptin Vagelettes are packaged in boxes of 14. (14-day regimen requires 2 boxes).
Store under refrigeration to insure full potency.
Federal law prohibits dispensing without prescription.

Candeptin®
(candicidin) Vaginal Tablets/Ointment, VAGELETTES™ Vaginal Capsules
depend on it as your agent of first choice

Innovators in Candicidin Therapy
Julius Schmid Pharmaceuticals
423 West 55th Street
New York, New York 10019


Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select

Silain-Gel® Tablets:

when the patient prefers a liquid, select

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide

Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

sterile solution (300 mg. per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

and single-dose 2 ml.
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49001

970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

once-popular treatment for back pains
as to have the seventh son of a seventh son
and or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

or headache, a sovereign remedy was
wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

ach tablet contains:
odeine Phosphate gr. 1/2 (Warning–
ay be habit forming), Phenacetin gr. 2 1/2,
spirin gr. 3 1/2, Caffeine gr. 1/2.

Keeps the promise of pain relief

'W. & Co.' narcotic products are
ass "B", and as such are available on oral
escription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

JUDGE ANTIBIOTIC OINTMENTS HERE

Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Fathers and Sons in Medicine

Two Of Many Native Mississippians—The Armstrongs

For two years Mississippi came ahead of Alabama in the roll call of States, it being the 20th State in the Union (1817) and Alabama the 22nd (1819). Which may be significant in light of the fact that, to this day, a surprising number of Alabama doctors are native Mississippians.

Among them are Drs. James H. Armstrong, Sr. and Jr.

The first of that name was born on Thursday, Aug. 1, 1912, at Vaiden, Miss. With his baccalaureates in Arts and Sciences from the University of Mississippi at Oxford, he went to Tulane for his M. D., interned at Lloyd Nolan Hospital, Fairfield, Ala., and returned to Oxford to become assistant in surgery at the Oxford Hospital. He also served as school physician and taught minor surgery at the University.

As war clouds lowered over the nation, he entered the Army in 1940 and a year later was graduated from the School of Aviation Medicine, Randolph Field, Texas. A lieutenant colonel when he left the Air Force in 1946, he moved immediately to Selma, where he has been in general practice and surgery every since.

Meantime, Dr. Armstrong was married to the former Margaret Vance Keys of Oxford, and two children were born to them. Their daughter, Rene, is today Mrs. Grover M. Myers, whose husband is a native of Laurel, presently a patent attorney in the nation's capital.

James Harris Armstrong, Jr., was born on Tuesday, July 18, 1944, in Greenville, Miss. Graduating from Parrish High School, in Selma, he received his B. A. degree from Davidson College, North Carolina, in 1966, and his M. D. from the University of Alabama in June, 1970. Presently, married to the former Nichole Ashley of Huntsville, he is serving his internship at Carraway Methodist Hospital, Birmingham, eyeing orthopedics as a specialty.

Dr. Armstrong, Jr.

Dr. Armstrong, Sr.

Hunting and golf are the leisure-time pursuits of the younger Dr. Armstrong, but his father prefers fishing and reworking antique furniture.

If a man can write a better book, preach a better sermon, or make a better basket than his neighbor, though he build his house in the woods, the world will make a beaten path to his door.

—Ralph Waldo Emerson (1803-1882)

I'll study and get ready, and then maybe my chance will come.

—Abraham Lincoln (1809-1865)

Anger is a short madness.

—Horace (65 B.C.-8 B.C.)

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDiCENTER
OF AMERICA

A Nice Place to Get Well

Medicenter of America / Mobile, Alabama 36607

Hobbies To Fill A Doctor's Leisure

Conversations That Girdle The Globe

DR. J. E. CAMERON

Photo by Graves

(A Physician At Play)

Drifting on an ice floe in the Arctic Sea, not too many miles from the North Pole, a homesick Alabamian wanted to talk with his family. So he broadcast an appeal for help to anyone on the same wavelength.

A "ham" radio operator in Alexander City picked up his call, contacted the telephone operator there, who made a "collect" call to the homesick Alabamian's family in Mobile. The connection was put through and the only cost was the long-distance toll from Alexander City to Mobile.

The "ham" operator happened to be Dr. James E. Cameron, vice president for the Northeastern Division of the Medical Association of the State of Alabama, who for forty years has been in general practice and surgery in Tallapoosa's county seat.

Interested in all aspects of radio since he was a boy of 7, Dr. Cameron doubtless could have qualified for his license long before he sought and obtained it twelve years ago. He modestly suggests that he must be one of two dozen Alabama doctors who are quali-

fied and licensed. To get a license one must pass an examination showing a working knowledge of the laws, rules, treaties, operational radio practice and theory, radio wave length propagation, and an ability to transmit and receive in the Morse code.

In the years he has been licensed, his radio has been used in medical emergencies, just as has his other hobby—flying. Piloting a plane through the skies of Alabama is an enthusiasm much more recently acquired. After all, the Wright brothers' flying contraption was just four years old when a son was born in Birmingham to the late Hallie (Edwards) and William James Cameron, Jr. The father subsequently would become an aviation engineer, which might account for the son's belated interest in the same means of transportation. Dr. Cameron obtained his private pilot's license about the time the Allied armada was sweeping across the English Channel to punch Fortress Europe into submission. This was 1944 and he has amassed some 2,000 logged flying hours since then, presently working on his instrument rating.

Born Aug. 18, 1907—on the 320th birthday of Virginia Dare, the first child born in America of English parents—with his M. D. degree from Tulane in 1930, Dr. Cameron is married to the former Edith Ellison of Hurtsboro, and they four living children, James E. Cameron, Jr.; three married daughters, Edith Blankenship, Elaine Mayfield, Eleanor Carlisle; and seven grandchildren.

And perhaps, at the very moment you are reading this article about him (patients alone preventing!), Dr. Cameron is sitting in his radio "shack" talking with some distant corner of the world. In years past, his conversations have extended from the North Pole, and the scientific expedition on an ice floe, to the South Pole, where a permanent naval observatory is located, and have girdled the globe, logging talks with New Zealand, Australia, Europe, islands of the Pacific, the Caribbean, the Atlantic, not to mention every one of the fifty United States, from Alabama to Alaska and Hawaii.

And when the notion strikes, when time and patients permit, he noses his plane skyward, away from Alexander City, to wherever he'd like to go.

Vital Statistics

NEW MEMBERS

Dale County

Ouzts, Len Moore, b 37, mc Alabama 63, sb 64, Dale County Hospital, Ozark, Alabama 36360.

Dallas County

Dillard, Jerry Dean, b 41, mc Alabama 66, sb 67, 726 Dallas Avenue, Selma, Alabama 36701. ObG.

Parish, Havner Hurd, Jr., b 28, mc Washington 56, recip. Mo. 70, Doctors Park, New Orrville Road, Selma, Alabama 36701. U.

Etowah County

Isbell, Euclid Arnold, Jr., b 36, mc Tulane 63, recip. La. 70, 1039 Forrest Avenue, Gadsden, Alabama 35901.

Miles, Gordon Lynn, b 40, mc Vanderbilt 65, recip. Tenn. 71, Medical Arts Building, 303 Bay Street, Gadsden, Alabama 35901.

Suttle, Roger Carlisle, Jr., b 37, mc Tulane 63, recip. La. 63, 701 Noojin Building, Gadsden, Alabama 35901.

Houston County

Cook, Roddy Dean, b 42, mc Alabama 69, recip. NBME 70, 509 West Main Street, Dothan, Alabama 36301. GP.

Mason, Billy Harold, b 35, mc Tenn. 66, recip. Tenn. 69, 509 West Main Street, Dothan, Alabama 36301. D.

(Continued on Page 749)

Nothing new about Synirin other than ...it's a stable, uncoated, fast disintegrating tablet of aspirin with pentobarbital potentiating the aspirin analgesia.

Synirin®

ASPIRIN 5 GR.—PENTOBARBITAL 1/8 GR.

ETHICAL ANALGESIA (economical if prescribed in 100 units with privilege of refills)

PRESCRIBING INFORMATION: To relieve tension headaches and arthritic pains, 2 tablets q 4 h. Aspirin and pentobarbital begin their action promptly, continuing for about 4 hours. The small pentobarbital content gives no perceptible sedation. Pentobarbital is destroyed by the body and there is no accumulation. Synirin will supply any aspirin therapy with equal safety. Use aspirin with caution in peptic ulcer.

EACH UNCOATED TABLET CONTAINS:

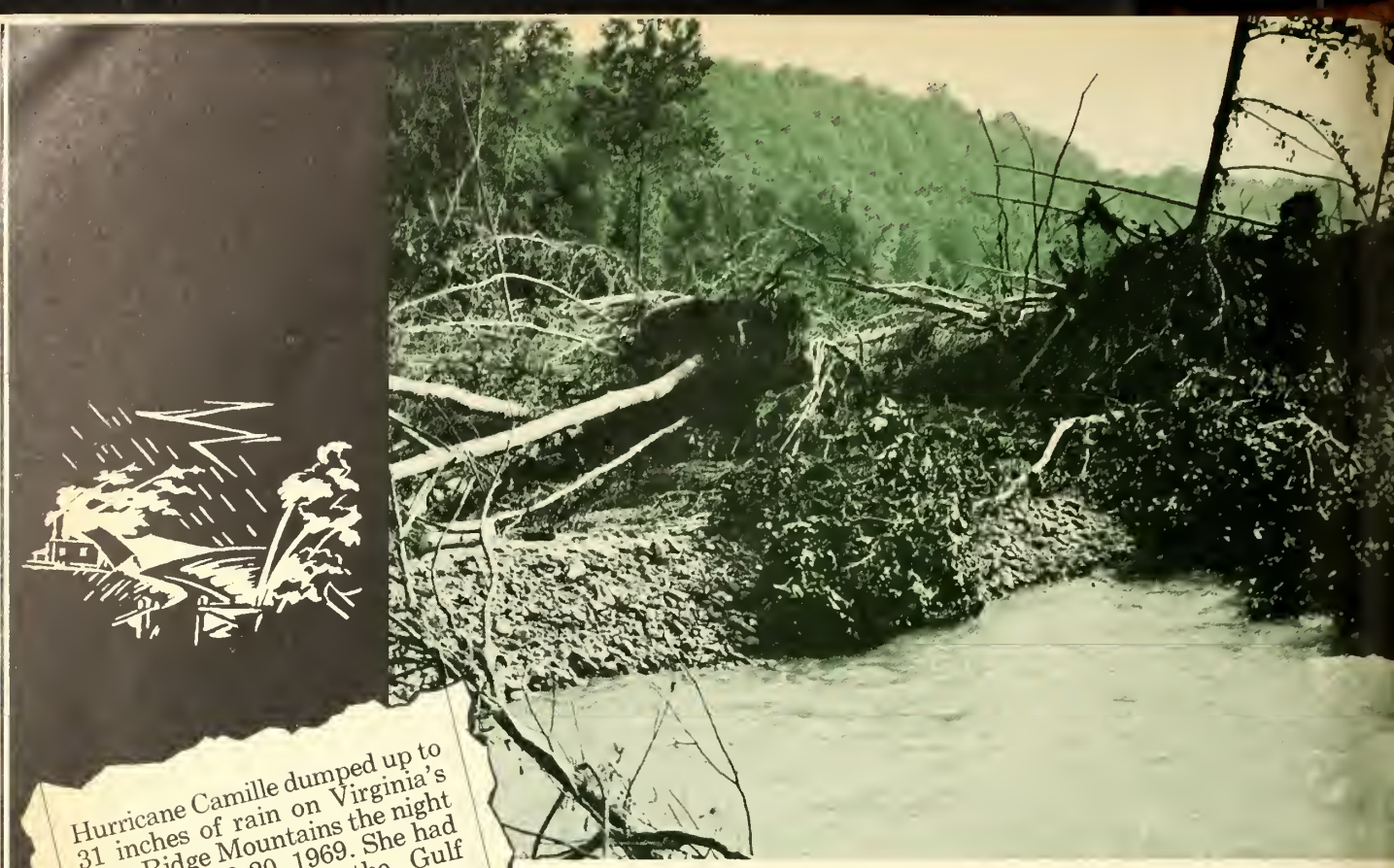
Aspirin .....325 mg. (5 gr.)
Pentobarbital* .....8 mg. (1/8 gr.)
*May be habit forming.

Federal law prohibits dispensing without prescription

DISPENSED IN BOTTLES OF 100 AND 1000 TABLETS

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

A clinical supply of this new aspirin formulation may be requested.



Hurricane Camille dumped up to 31 inches of rain on Virginia's Blue Ridge Mountains the night of August 19-20, 1969. She had already devastated the Gulf Coast from Louisiana to Florida, halted her northward journey over Kentucky and Tennessee, then headed eastward over West Virginia and Virginia.
Cooperative Farmer

Emotional stress can be just as destructive to the individual as turbulent, ravaging flood waters are to land and property. Solfoton will contribute to the maintenance of a mental climate for purposeful living.

Solfoton®

SEDATION WITHOUT DEPRESSION

EACH TABLET OR CAPSULE CONTAINS:
Phenobarbital.....16 mg.
(Warning: may be habit-forming)
Bensulfoid (See PDR).....65 mg.

Precaution: same as 16 mg. phenobarbital

DOSAGE: One tablet or capsule every 6 hours will sustain mild sedation.

Available in three forms to satisfy prescribing circumstances:

TABLETS	100s	500s	5000s
CAPSULES	100s	500s	1000s
TABLETS S/C	100s	500s	4000s

Federal law prohibits dispensing without prescription

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

(Continued from Page 746)

Jackson County

Letson, Louis Etheridge, Jr., b 40, mc Alabama 66, recip. NBME 70, 809 East Laurel Street, Scottsboro, Alabama 35768. GP.

Jefferson County

Chapman, Lee Barton, b 39, mc Alabama 64, sb 65, 924 South 19th Street, Birmingham, Alabama 35205.

Frink, Richard James, b 29, mc Iowa 58, recip. Iowa 70, 1919 South 7th Avenue, Birmingham, Alabama 35233. I.

Gantt, Charles Bernard, Jr., b 40, mc Alabama 66, sb 67, 1100 Bankhead Hwy., S.W., Graysville, Alabama 35073. GP.

Gore, Hazel, b 23, mc Sydney, N.S.W. 45, limited license 70, 1919 South 7th Avenue, Birmingham, Alabama 35233.

Greene, James Allen, b 39, mc Tenn. 63, recip. Miss. 70, 7000-5th Avenue South, Birmingham, Alabama 35212. P.

Hardy, George Edwin, Jr., b 39, mc Cornell U. 65, recip. NBME 70, 1912-8th Avenue South, Birmingham, Alabama 35233. PH.

Haynes, Russell Nesbit, b 36, mc Alabama 63, sb 64, 801 Princeton Avenue, S. W., Birmingham, Alabama 35211. NE.

Hood, William Plexico, Jr., b 34, mc South Carolina 60, recip. S. C. 70, 1919-7th Avenue South, Birmingham, Alabama 35233. I.

Jackson, David Huntsman, b 37, mc Alabama 63, sb 64, 1919 South 7th Avenue, Birmingham, Alabama 35233.

Jackson, George Barry, b 37, mc U. Kansas 63, recip. Kansas 70, 1919 South 7th Avenue, Birmingham, Alabama 35233. ObG-Anes.

Karp, Robert Bruce, b 34, mc U. Calif. 58, recip. Calif. 69, 1919 South 7th Avenue, Birmingham, Alabama 35233. S.

Lambert, Charles Richard, b 42, mc Alabama 68, sb 69, Lloyd Noland Hospital, Fairfield, Alabama 35064. S.

Lassiter, Kenneth Robert Lee, b 36, mc Duke U. 61, recip. N. C. 70, 514 Medical Arts Building, Birmingham, Alabama 35205. NS.

Lewis, Robert Hugh, b 35, mc Alabama 65, sb 66, 2016 South 10th Avenue, Birmingham, Alabama 35205. ObG.

Linton, Patrick Hugo, b 25, mc Alabama 53, sb 54, 1919 South 7th Avenue, Birmingham, Alabama 35233. P.

Luther, Jerry Robert, b 31, mc U. Tenn. 66, sb 68, 800 Montclair Road, Birmingham, Alabama 35213.

March, Edward Russell, Jr., b 34, mc Alabama 65, sb 66, 1919 South 7th Avenue, Birmingham, Alabama 35233. I-C.

Miller, Alexander Corbett, Jr., b 38, mc Alabama 64, recip. NBME 65, 1529 North 25th Street, Birmingham, Alabama 35234. I.

Oget, Solmaz, b 31, mc Ankara U. 56, limited license 69, 1919 South 7th Avenue, Birmingham, Alabama 35233. Anes.

Renneker, William Courtenay, Jr., b 36, mc Alabama 64, sb 65, 1919 South 7th Avenue, Birmingham, Alabama 35233. U.

Soto, Benigno, b 29, mc U. San Marcos 55, limited license 70, 1919 South 7th Avenue, Birmingham, Alabama 35233.

Stafford, George Timothy, III, b 38, mc Alabama 64, sb 65, Lloyd Noland Hospital, Fairfield, Alabama 35064.

Wade, Stanley Allen, Jr., b 46, mc Alabama 69, recip. NBME 70, Lloyd Noland Hospital, Fairfield, Alabama 35064.

Wilensky, Allan Seymour, b 41, mc Alabama 65, sb 66, 1919 South 7th Avenue, Birmingham, Alabama 35233. I.

Williston, William Curtis, b 35, mc Western Reserve 67, recip. NBME 68, 4237 Sharpsburg Drive, Birmingham, Alabama 35213. Anes.

Macon County

Brooks, Ivy O. Roach, b 16, mc Meharry 54,

(Continued on Page 751)

when manhood ebbs... or is delayed due to testicular hormonal insufficiency

What nature denies, Halotestin may replace. That's the purpose of this orally active androgen in conditions such as impotency, eunuchoidism, and eunuchism. The most widely used agent of its kind, Halotestin is replacement therapy with approximately five times the potency of oral methyltestosterone. And, at its recommended daily dosage of 2 to 10 mg., Halotestin is economical as well as convenient. Of course, you will want to employ androgens carefully in young boys to avoid premature epiphyseal closure... and in the elderly where possible sodium retention may, minimally, precipitate edema. Tablets of 2, 5, and 10 mg.

Halotestin® 5 mg. tablets

(fluoxymesterone Upjohn)

oral replacement with parenteral-like potency

Please see facing column for summary of contraindications, precautions, and adverse reactions.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

alotestin®
oxymesterone, Upjohn)

ly active androgen about 5 times as potent
abolic and androgenic activity as methyltes-
rone. Halotestin (fluoxymesterone) induces
ficant retention of calcium and potassium,
etention of sodium not marked. Doses below
mg. daily have little effect in producing
tinuria.

cations *Male:* Replacement therapy in tes-
ar hormone deficiency states. Prevents atro-
of the accessory male sex organs following
ration for as long as therapy is continued.
otence and male climacteric symptoms when
to androgen deficiency. Primary eunuchoid-
and eunuchism. Delayed puberty when es-
shed as not a simple familial trait. Indicated
hose symptoms of panhypopituitarism re-
to hypogonadism, however, appropriate
nal cortical and thyroid hormone replace-
therapy remain of primary importance.
ale: Palliation of androgen-responsive, ad-
ed, inoperable breast cancer in women be-
n 1 and 5 years postmenopausal or women
hom castration has shown the tumor to be
one dependent. Prevention of postpartum
st manifestations of pain and engorgement;
is no satisfactory evidence that this drug
ents or suppresses lactation per se. In os-
prosis androgens may be of adjunctive
to adequate considerations of diet, cal-
balance, physiotherapy and general health
oting measures. *Males and Females:* In the
ment of protein depletion states which oc-
n geriatric patients, in debilitation states, in
nic corticoid therapy, resistant fractures;
orchidism; creating a positive nitrogen bal-
, tissue repair and other anabolic effects.
ogenic steroids may produce a response in
stic anemias, myelofibrosis, myelosclerosis,
genic myeloid metaplasia and hypoplastic
nias due to malignancy or myelotoxic drugs.
ogens are not of value in other anemias.

raindications Pregnancy (may virilize fe-
fetus), mammary carcinoma in the male,
atic carcinoma, severe liver disease, severe
orenal disease and severe persistent hy-
lcemia.

autions Employ with caution in young boys
oid precocious sexual development and
ature epiphyseal closure. Androgens tend
omote retention of sodium and water, there-
watch for edema—particularly in the elderly.
ence and severity of edema have been
nal and have been associated only with
doses used for palliation of breast cancer.
rcalcemia may occur, particularly in patients
metastatic breast carcinoma; if this occurs
rug should be discontinued. Changes in
function tests, such as increased BSP re-
n and SGOT levels, can occur during ther-
Jaundice has been rarely reported. If liver
on tests are altered, discontinue medica-
or reduce dose. Priapism is indicative of
sive dosage and is indication for tempo-
withdrawal of drug. When treating protein
tion states or osteoporosis, an adequate
hould be provided and prolonged immobili-
avoided whenever possible. When treating
ic or hypoplastic anemias, androgen ther-
hould not replace other measure such as
usion, correction of iron deficiency, anti-
rial therapy, and the use of corticosteroids.

se reactions Nausea, dyspepsia, men-
irregularities, hepatic dysfunction, pria-
edema, precocious sexual development,
premature epiphyseal closure in young
ts have been reported. *Male*—Prolonged
istration or excessive dose may cause
ion of testicular function with oligospermia
decreased ejaculation volume. *Female*—
doses or prolonged administration may
ce masculinization with signs such as hir-
, deepening of the voice, enlargement of
litoris, acne, and sometimes, increased

ied *Tablets: 2 mg.*, scored—bottles of 100./
, scored—bottles of 50./*10 mg.*, scored
es of 50.
dditional product information, see *your*
n representative or consult the package
ir.

The Upjohn Company, Kalamazoo, Michigan
-R MED 8-5-5 (LQX)

(Continued from Page 749)

sub 56, Tuskegee V.A. Hospital, Box 511, Tuskegee, Alabama 36083. R.

Norris, James Ellsworth Chiles, b 32, mc Western Reserve 57, recip. NBME 70, Tuskegee V.A. Hospital, Tuskegee, Alabama 36083. S.

Story, Robert Howard, b 40, mc Alabama 67, recip. NBME 68, 412 East Southside, Box 703, Tuskegee, Alabama 36083. GP.

Madison County

Bercaw, Beauregard Lee, b 38, mc Virginia 64, recip. Va. 70, 401 Lowell Drive, Huntsville, Alabama 35801. N.

Upchurch, Charles Marion, b 37, mc Bowman Gray 63, recip. N.C. 70, 401 Sivley Road, Huntsville, Alabama 35801. Pd.

Mobile County

Condom, Jaime Ernesto, b 32, mc U. Madrid 62, sb 70, Searcy Hospital, Mt. Vernon, Alabama 36560.

(Continued on Page 752)

Not just a motel
it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

(Continued from Page 751)

Healy, William Rene', b 39, mc Tulane 64, recip. La. 70, 1359 Springhill Avenue, Mobile, Alabama 36604. Oph.

Roberts, James Walter, Jr., b 38, mc Alabama 65, sb 66, 3920 Airport Blvd., Mobile, Alabama 36608.

Stone, Donald Lewis, b 36, mc Arkansas 61, recip. Arkansas 70, P. O. Box 7544, Mobile, Alabama 36607.

Tuscaloosa County

Brandes, Peter I., b 10, mc Michigan 35, recip. N.Y. 70, Student Health Center, University, Alabama 35486. U.

Koenemann, Lynn Crook, b 39, mc Alabama 66, recip. NBME 70, Druid City Hospital, Tuscaloosa, Alabama 35401.

Quenzer, Fred August, b 12, mc U. Illinois 37, recip. Ill. 70, Student Health Center, University, Alabama 35486.

Sneed, David Goodloe, b 42, mc Alabama 69, recip. NBME 70, Druid City Hospital, Tuscaloosa, Alabama 35401.

Thomas, George Emanuel, b 40, mc Alabama 68, recip. NBME 70, Druid City Hospital, Tuscaloosa, Alabama 35401.

MEMBERS DECEASED

DeKalb County

Hansard, William S., Ider, Alabama, Deceased 4-11-70

Jefferson County

Lovett, William J., Birmingham, Alabama, Deceased

Martin, Wade A., St. Petersburg, Florida, Deceased 7-1-70

Smith, Charles H., Albany, Georgia, Deceased

Marion County

Busby, S. S., Hamilton, Alabama, Deceased 3-31-70

Mobile County

Johnson, Gayle T., Mobile, Alabama, Deceased

Montgomery, County

Tyler, Thomas B., Montgomery, Alabama, Deceased 3-13-71

Tuscaloosa County

Conwill, Gratton B., Tuscaloosa, Alabama, Deceased 8-12-70

MEMBERS REMOVED

Clarke County

Rudder, William H., Jackson, Alabama, Transfer to Nonmember

Conecuh County

Owensby, David E., Evergreen, Alabama, Transfer to Nonmember

DeKalb County

Taylor, Emmett L., Jr., Richmond, Virginia, Moved from State

Escambia County

Robinson, Thomas H., Atmore, Alabama, Transfer to Nonmember

Stuart, Fletcher S., Sewanee, Tennessee, Moved from State

Jefferson County

Baxley, William A., Albuquerque, New Mexico, Moved from State

Garber, Jacob H., Harrisburg, Pennsylvania, Moved from State

Norman, Joe R., Jackson, Mississippi, Moved from State

Norman, Patricia H. F., Jackson, Mississippi, Moved from State

Patton, Francis M., Metairie, Louisiana, Moved from State

Phillips, Robert D., Chicago, Illinois, Moved from State

(Continued on Page 763)

THIS SPACE CONTRIBUTED BY THE PUBLISHER AS A PUBLIC SERVICE

the quality of survival

With the steady improvement in the therapy of cancer, and consequent increase in the number of 5-year survivals, our programs reflect increasing concern with the future of the cancer patient—with the *quality* of his survival.

High priority is being given to the rehabilitation of cancer patients—those having had mastectomies, colostomies, laryngectomies, amputations, and other drastic treatments for cancer.

Our "Reach to Recovery" program is a dramatic example. This program helps the physician meet many special needs of the postmastectomy patient on the road to total recovery. Patients receive psychological reassurance and practical help from women who have had the same surgery.

The laryngectomee also receives the benefit of our rehabilitation program. Supported by the Society, the International Association of Laryngectomees, through its local IAL clubs, provides such services as individual and group speech therapy, psychological counseling, visits to new patients, safety training, public education and social activities.

Our rehabilitation programs not only give heart and help to patients but provide the physician with vital aids necessary to improve the *quality* of survival.

American Cancer Society

Efudex®
(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses–
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completely. Residual mild erythema remains in some areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N J 07110

An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually done. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

new
Efudex®
(fluorouracil)
cream/solution

*Data on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 28; Medical College of Alabama, 1967; National Board; serving general surgery residency Available July 1971. LW-3

Age 49; University of Pittsburgh, 1951; seeking group or industrial practice. LW-3/1

Age 27; George Washington University 1969; National Board; Available July 1971. LW-3/2

Internal Medicine—

Age 34; Georgetown University, 1962; Board certified; seeking group or associate practice. Available August 1971. LW-4

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 33; Medical College of Alabama, 1963; National Board; Available January 1971. LW-4/1

Age 30; New York University, 1965; Board eligible; National Board; interest in cardiology. LW-4/2

Age 31; University of Arkansas, 1964; Board certified; seeking group or associate practice, interest in cardiology. Available July 1971. LW-4/3

Age 31; Albert Einstein College, 1964; National Board, seeking group, associate or institutional practice. Available July 1971. LW-13

Age 34; Louisiana State University, 1963; Board certified; seeking group practice. Available August 1971. LW-13/5

Age 50; McGill University, 1948, Board certified, seeking solo, group, or associate practice, interest in gastroenterology. LW-4/4

Obstetrics-Gynecology—

Age 34; New York Med. College, 1964; National Board, Board eligible; seeking group or associate practice. Available August 1971. LW-5/1

Age 38; University of Georgetown, 1959, National Board, Board certified, seeking group practice. LW-5/2

Ophthalmology—

Age 30; University of Nebraska, 1965; seeking group or associate practice. Available July 1971. LW-6

Age 34; Yale University, 1964; National Board, Board certified; seeking solo, group, industrial or associate practice. Available July 1971. LW-6/1

Age 35; Louisiana State University, 1963; Board eligible, seeking group or associate practice. Available January 1972. LW-6/2

Orthopedic Surgery—

Age 32; University of Illinois, National Board, seeking associate practice. Available February 1972. LW-14

Otolaryngology—

Age 33; Loyola University, 1964; Board eligible; seeking solo or associate practice. Available July 1971. LW-7

Age 33; Wayne State University, 1966; Available July 1971. LW-7/1

Age 31; Northwestern University, 1964; Board eligible; National Board; seeking solo, group or associate practice. Available September 1971. LW-7/2

Pathology—

Age 32; Case Western Reserve University, 1964; National Board; Board certified; seeking group, associate or institutional practice. Avialable August 1971. LW-8

Age 33; Creighton, 1964; Board certified; National Board; seeking group or associate practice. Available July 1971. LW-8/1

Age 30; University of Texas, 1967; seeking solo, group or associate practice. Available March 1971. LW-22

Age 39; Ankara Medical School, Turkey, 1956; Board eligible; seeking associate practice. LW-8/2

Pediatrics—

Age 31, American University of Beirut, 1967; Board certified; interested in pediatrics/pediatric cardiology. seeking group or associate practice. Available July 1971. LW-9/1

Radiology—

Age 31; University of Kansas, 1965, seeking group practice. Available July 1971. LW-10

Age 32; Medical College of Alabama, 1963; completing residency in radiology. LW-24/2

Age 31; Vanderbilt University, 1965; National Board; Board certified; seeking group or associate practice. Available July 1971. LW-10/1

Age 35; University of North Carolina, 1961, Board eligible; Available early 1971. LW-10/2

Age 30; University of Kentucky 1965; Board eligible; seeking group, or associate practice. Available July 1971. LW-10/3

Surgery—

Age 30; Medical College of Alabama 1965; National Board; Board eligible; interested also in general practice with surgery; Available July 1972. LW-11

Age 31; Medical College of Alabama 1964; National Board. Available July 1971. LW-31/6

Age 33; University of Tennessee 1963; Board eligible; seeking solo, group, associate or institutional practice. Available July 1971. LW-11/1

Age 33; Emory University 1964; Board eligible; seeking solo, group or associate practice. Available July 1971. LW-11/2

Locations Wanted

Age 35; West Virginia University, 1964; Board eligible; interested in thoracic and cardiovascular surgery; group or associate practice. Available July 1971. LW-11/3

Age 46; Duke University, 1953; National Board, Board certified; seeking group, associate or institutional practice. Available summer 1971. LW-11/4

Age 37; University of Montreal, 1959; Board eligible, seeking solo, group, or associate practice, interest in plastic surgery with or without general surgery. Available summer-fall 1971. LW-11/5

Urology—

Age 33; University of Chicago 1963; Board eligible; interested in academic affiliation. Available August 1971. LW-12

University of Illinois, 1964, National Board, Board eligible; seeking solo, group or associate practice. Available July 1971. LW-12/1

Physicians Wanted

Special Openings—

Qualified specialists wanted for private practice in internal medicine, general surgery, Ob-Gyn, general practice, pediatrics, anesthesiology, orthopedics, and other sub-specialties. Office space in 250-bed private hospital, Guaranteed initial income and other benefits. PW-17

General surgeon, Board certified, needs young associate to do general practice including obstetrics. Salary negotiable. PW-19

Two physicians, ages 39 and 40, are interviewing for a select individual to enter association in a university town of 80,000 population. Outstanding new physical plant. Readily available hospital privileges. Four and one-half day work week. Three free weekends per month. PW-19/2

Opportunity for ENT, Internal Medicine, and Orthopedic Surgery practitioners to join partnership at clinic located in city of 38,000 population in trade area of 150,000 population in northeast Alabama. PW-20/2

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Opportunity in town of 4,000 population in trade area of 50,000 population, located within 100 miles of two metropolitan areas in south Alabama. Industrial and farming area. 44-bed hospital. Office space and equipment available in new building with another physician. Several churches, schools, and service clubs. PW-1

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

For town of 10,000 population in county of 40,000 population located in scenic mountainous section of Northeast Alabama. Office space and equipment available. Hill-Burton hospital-nursing home. Expanding industries in top agricultural area. PW-1-2

Physician wanted to join 39 year old Medical College of Alabama graduate in a well established practice in West Central Alabama town. Salary initially followed by full partnership. PW-1-4

Hospital based professional association in suburb of Birmingham is seeking a young general practitioner who has completed military obligation. High income, profit sharing, paid vacation and retirement plan. Complete facilities available. No investment required. PW-1-5

Opportunity in town of 2,500 population in Northeast Alabama in trade area of 15,000 population, located 7 miles from city of 55,000, and four miles from a 300-bed modern hospital. Position available for one who has not served military commitment. Clinic building and some equipment available. Willing to build a new clinic for two doctors or a small group. Especially seeking general practitioner and internist. PW-1-7

Opportunity for two general practioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Alabama Department of Public Health

Air Pollution

By Joyce Murphree, Information Specialist

Alabama Department of Public Health

Legislation to strengthen the state's air pollution control law will be proposed when Alabama lawmakers convene. The Alabama Air Pollution Control Commission has drafted legislation, which repeals present law.

Dr. Ira L. Myers, state health officer and chairman of the commission, said the purpose of the proposed law is "to protect health, welfare, property, and the quality of life and to assure that no air contaminants are discharged into the atmosphere without being given the degree of treatment or control necessary to prevent air pollution." The present law places strong emphasis on economic development.

A resolution adopted at the initial meeting of the commission noted that enforcement provisions contained in the Alabama Air Pollution Control Act—adopted in 1969—"are vague, confusing, contradictory, and too lenient for proper enforcement of the standards this commission may set." It was also pointed out that the act "as now written does not contain adequate enforcing authority" and asked that "this deficiency be remedied."

Enforcement procedures outlined in the law and the seven-year "grandfather" clause were two principal reasons why the state was denied matching funds by the federal government. If the law is changed to comply with federal requirements, the state will be eligible for federal funds on a three-to-one matching ratio based on new money or additional appropriations.

The new legislation proposed by the Alabama Air Pollution Control Commission omits the "grandfather" clause contained in the present law and provides for a less complex enforcement procedure. The proposed law, which has been unofficially approved by the federal Environmental Protection Agency, authorizes the commission to take immediate enforcement action.

Key points of the proposed legislation include:

—authorizes the commission to make rules and regulations, including establishment of emission standards.

—provides for an emergency plan in which the governor, by executive order, may "prohibit, restrict, or condition any and all activities which contribute to any emergency condition." A violation of the governor's executive order may subject the violator to a felony conviction, punishable by a fine of not more than $100,000 or a 10-year sentence, or both.

—provides for punishment of other violations of the law as a misdemeanor. Violators are subject to a jail sentence of up to 12 months at hard labor, a fine of $10,000, and a

fine of $1,000 a day for continuation of pollution.

Provides that municipalities and county boards of health may establish local air pollution control programs which are compatible with the state program.

—provides that the individual members of the commission presently serving will be reappointed and retains the present procedure for appointing members.

Persons nominated by industrially oriented groups comprise one-third of the total commission and do not constitute a majority. Four members are nominated by industrial groups, four by health groups, and four are appointed from the public-at-large. The governor makes appointments from the list of nominees.

In spite of the handicaps of insufficient funds and an inadequate law, some progress has been made in developing an air pollution control program, according to William T. Willis, director of the technical staff of the Alabama Air Pollution Control Commission.

The Alabama Department of Public Health has been involved in air pollution control since 1964, when the department was designated as the administrative agency for air pollution control by Governor George C. Wallace. The first air sampling station was established by the state health department in late 1964 or early 1965. Some air sampling stations were operating in Birmingham prior to 1964, but these were operated by a federal agency.

The fledgling program hasn't really gotten off the ground, however, in regard to abatement of pollution. Most of the work which has been done is of an organizational nature and background studies. By mid-February of this year, the state had established 45 particulate sampling stations throughout Alabama. Gaseous pollutants are being monitored with equipment contained in mobile laboratories in Birmingham and Mobile.

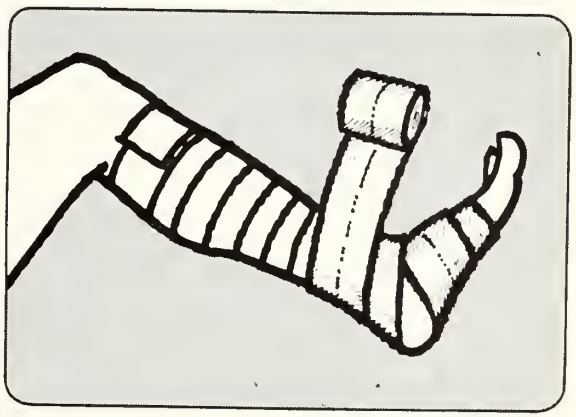
An emission inventory must be developed

(Continued on Page 760)

PRIMER®

PLUS

Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

EDWARD TAYLOR Ltd.
A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name ..... M.D.

Address .....

City .....

State ..... Zip .....

(Continued from Page 759)

and used in conjunction with actual sampling, Mr. Willis stated. An emission inventory is being compiled in all 67 counties by surveying potential sources of pollution—industrial plants, garbage dumps, and other sources. An inspection program is also needed, he added, to assure that potential sources are brought into compliance.

Regional offices have been proposed for the effective implementation of an air pollution control program. Mr. Willis envisions four regional offices, each staffed by an engineer and a sanitarian who would inspect possible pollution sources. The present air pollution staff consists of eight engineers, two chemists, and four sanitarians. A minimum of 30 technicians is needed for an effective statewide program, he said.

Dr. Myers has requested a state appropriation of $250,000 for air pollution control. Of this amount, $100,000 would be eligible for federal matching monies at the three-to-one rate, making a total budget of $550,000 annually.

If Alabama does not have an enforceable plan for controlling and preventing air pollution by late February, 1972, the federal Environmental Protection Agency will assume jurisdiction under the Clean Air Amendments of 1970.

Beginnings of Surgery

Disease and certain death have been an inevitable sequence in the life of man. But now life expectancy has been so lengthened it is natural to expect a child's life to extend beyond the legendary three score and ten years, and without much doubt that it will be achieved. This is attributable to the expansion of knowledge, science, and to great technical advances. Only part of this extension may be attributable to surgery, but it is the most dramatic part . . .

—Excerpt from Presidential Address by Howard Mahorner, M. D., F.A.C.S., New Orleans, after his inauguration as 51st President of the American College of Surgeons.

The man who has nothing to boast of but his illustrious ancestors is like a potato; the only good belonging to him is underground.

—Sir Thomas Overbury (1581-1613)

The first and best victory is to conquer self; to be conquered by self is of all things the most shameful and vile.

—Plato (427?-347?)

Ambulatory Patient Survey

Ambulatory medical care is by far the largest segment of the American health services system in terms of prevalence and volume. Yet, to date, little has been done on a national scale to gather reliable information for use in planning and research.

With the endorsement of the American Medical Association and most of the national specialty groups, the National Center for Health Statistics of HEW, is currently planning a National Ambulatory Medical Care Survey as part of its continuing program to provide data on the health status of the American people. The purpose is "to collect objective, quantitative information which can be used to describe the types of ambulatory patients seen by physicians, the nature of the patients' problems and the resources for their care.

The survey will involve a national sample of physicians who will be requested to provide data concerning a small number of the ambulatory patients they see. When the NAMCS is in full operation, sometime in 1972, about 3,000 physicians each year will be providing data on an estimated 240,000 ambulatory patient visits.

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

IN ASTHMA
IN EMPHYSEMA

optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

(Continued from Page 752)

Sox, Joe H., Birmingham, Alabama, Transfer to Nonmember

Thung, Nalda S., Birmingham, Alabama, Transfer to Nonmember

Limestone County

Karrh, Bruce W., Richmond, Virginia, Moved from State

Madison County

Broyles, John A., III, Lilburn, Georgia, Moved from State

Reskof, David A., Brooklyn, New York, Moved from State

Mobile County

Allgood, Homer W., Jr., Mule Shoe, Texas, Moved from State

Berry, Sidney R., Mobile, Alabama, Transfer to Nonmember

Campbell, Michael L., III, Chicago, Illinois, Moved from State

Foster, Warren J., Mobile, Alabama, Transfer to Nonmember

Montgomery County

Weathington, Warren T., Montgomery, Alabama, Transfer to Nonmember

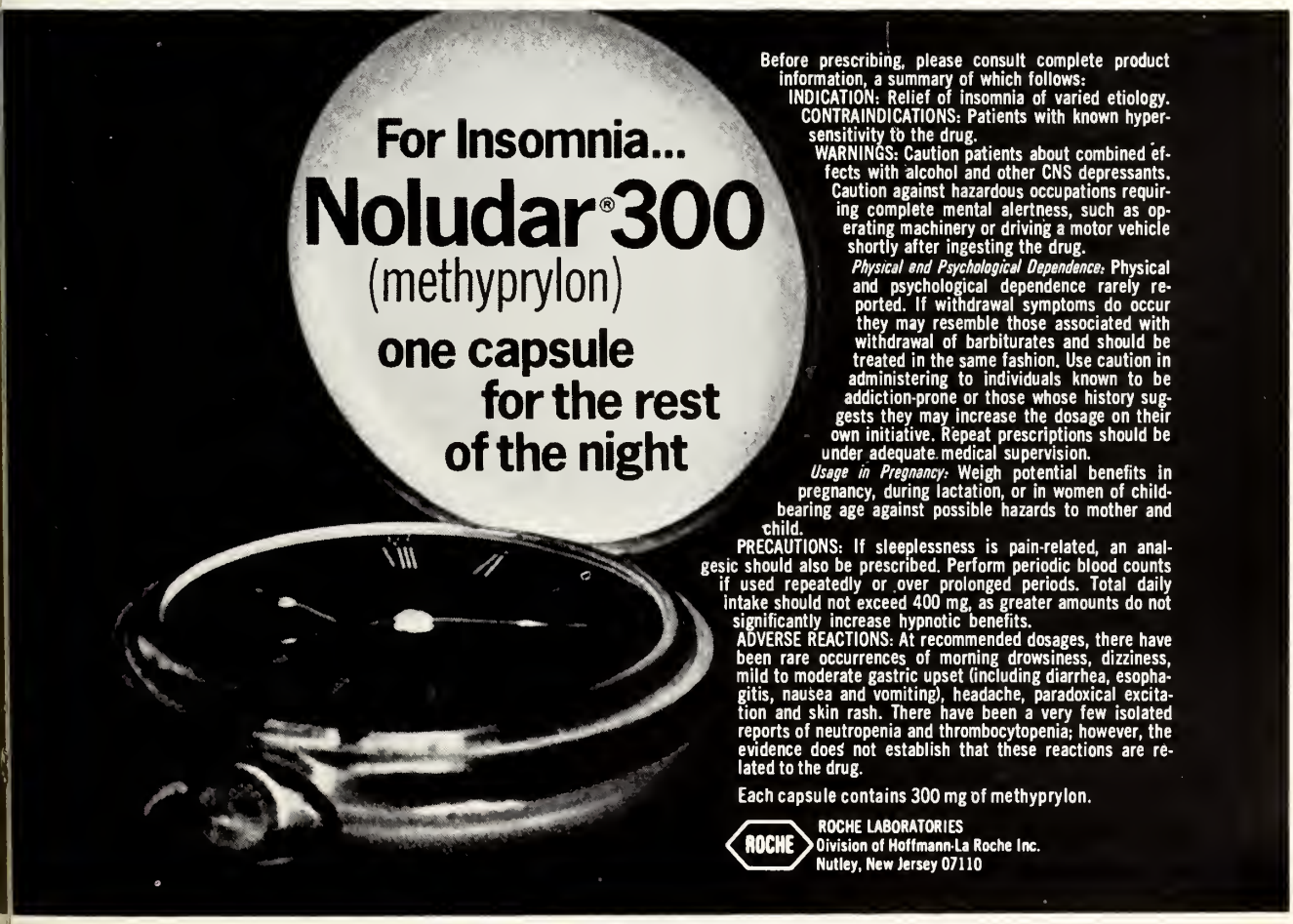
Morgan County

Galloway, George W., Jr., Atlanta, Georgia, Moved from State

Tallapoosa County

Hodnett, Cary G., Mountain Brook, Alabama, Transfer to Nonmember

McDavid, William E., Jr., Alexander City, Alabama, Transfer to Nonmember



Walker County

Payne, Thomas J., III, Jasper, Alabama, Transfer to Nonmember

CHANGES OF ADDRESS

Autauga County

Nichols, Robert K., present Prattville to East Main Street, Prattville, Alabama 36067.

Parker, Walter E., present Prattville to South Washington Street, Prattville, Alabama 36067.

Calhoun County

Smith, Lee S., Jr., present Anniston to 411 East 9th Street, Anniston, Alabama 36201.

Chilton County

Foshee, Phillip D., present Clanton to Powell Avenue, Clanton, Alabama 35045.

Choctaw County

Clark, James H., present Butler to 125 North Mulberry, Butler, Alabama 36904.

Gully, Virgil S., present Butler to 111 North Mulberry, Butler, Alabama 36904.

Land, Robert D., present Butler to 105 West Pushmataha, Butler, Alabama 36904.

Neville, George M., Jr., present Butler to 315 East Pushmataha, Butler, Alabama 36904.

Parker, Ivan, Jr., present Butler to 503 East Pushmataha, Butler, Alabama 36904.

Coffee County

Cooper, Luther B., present Elba to Highland Drive, Elba, Alabama 36323.

Crook, Donald H., present Elba to North Drayton Avenue, Elba, Alabama 36323.

Foy, Robert E., Jr., present Enterprise to 207 East Brunson Avenue, Enterprise, Alabama 36330.

Lumpkin, Thomas R., present Enterprise to Medical Arts Bldg., Brown Circle, Enterprise, Alabama 36330.

Stanley, James F., present Enterprise to Medical Center, George Wallace Drive, Enterprise, Alabama 36330.

Colbert County

Hamilton, Harold C., present Sheffield to P. O. Box 2241, Muscle Shoals Station, Colbert County Hospital, Sheffield, Alabama 35660.

Cullman County

Clemmons, Lowell H., present Cullman to District No. 1 T. B. Hospital, Decatur, Alabama 35601.

Dallas County

Ross, Carlos J., present Selma to P. O. Box 902, Selma, Alabama 36701.

DeKalb County

Guest, Reuben J., Jr., present Fort Payne to 709 Grand Avenue South, Box E, Fort Payne, Alabama 35967.

Elmore County

Lett, Joseph R., present Tallassee, to P. O. Box 426, Tallassee, Alabama 36078.

Etowah County

Azar, David A., present Gadsden to Holy Name of Jesus Hospital, 600 South 3rd Street, Gadsden, Alabama 35901.

Bass, John B., present Gadsden to P. O. Box 1130, 421 Wildhaven Circle, Gadsden, Alabama 35901.

Ford, Henry G., present Gadsden to Holy Name of Jesus Hospital, 600 South 3rd Street, Gadsden, Alabama 35901.

Houston County

Jones, Patrick B., Jr., present Dothan, to 1925 Fairview Avenue, Dothan, Alabama 36301.

(Continued on Page 768)

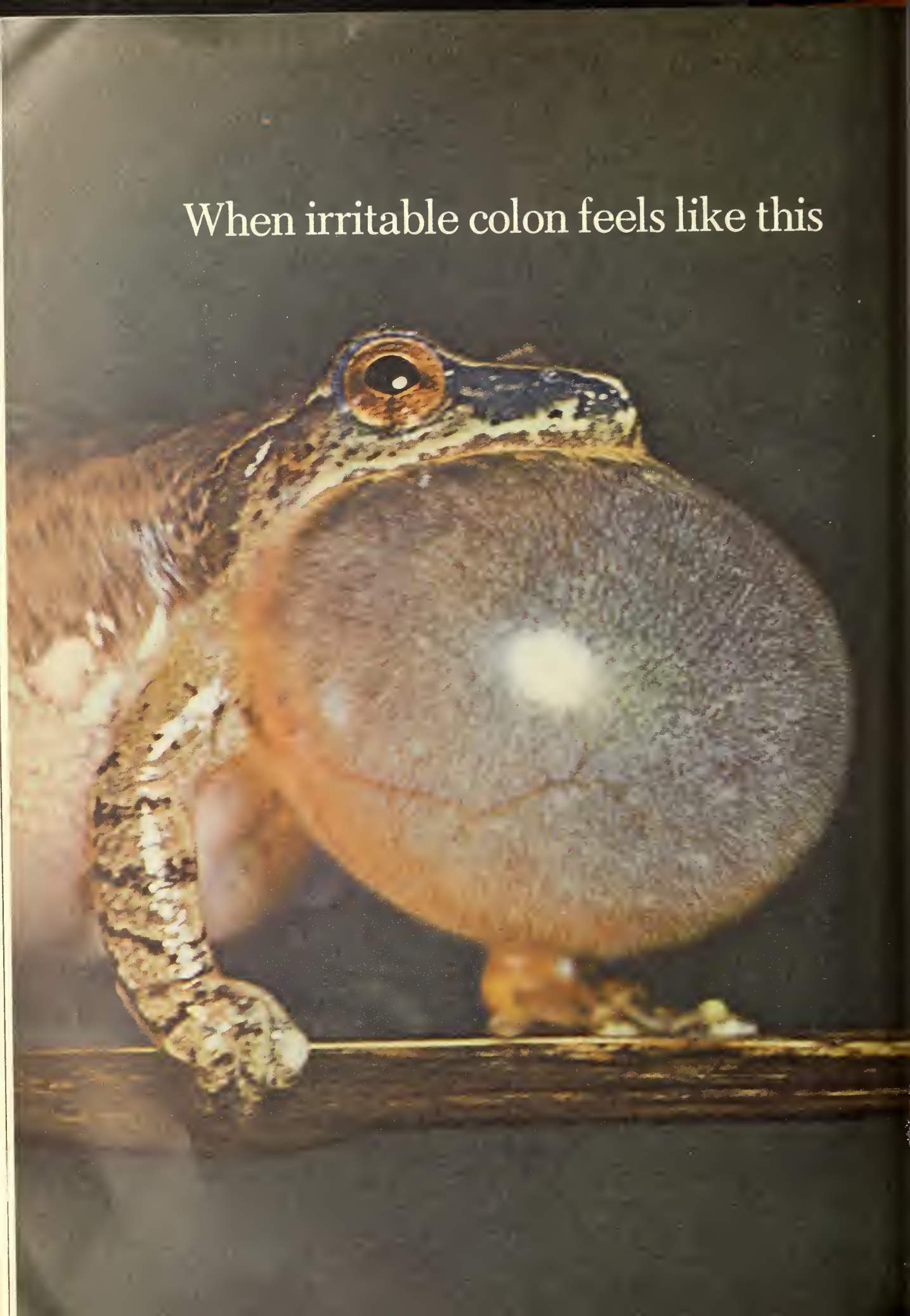
This "case history" runs to some 10,000 pages

This is a typical "case history" of one new drug—or, rather, a proposed new drug—assembled for submission to the U.S. Federal Food and Drug Administration. These volumes are the result of several years' work by thousands of professional and skilled personnel in just one pharmaceutical company's research laboratories, and by hundreds of physicians in medical schools, hospitals, and private practice. They cover every aspect of experience with this proposed new agent from chemical laboratory to clinic, from mouse to man. Each volume could conceivably represent hundreds of thousands of dollars of financial investment, countless hours of human effort. This veritable mountain of data stands behind every new agent offered to you by pharmaceutical manufacturers—a reassuring testimonial to the efficacy, safety and purity of the drugs you will prescribe today to lower the cost of disease to your patients.

Pharmaceutical Manufacturers Association
Pharmaceutical Advertising Council
1155 Fifteenth St., N. W., Washington, D.C. 20005

This message is brought to you as a courtesy of this publication on behalf of the producers of prescription drugs.

When irritable colon feels like this



...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

☐ **belladonna alkaloids—for the hyperactive bowel**
☐ **simethicone—for accompanying distension and pain due to gas**
☐ **phenobarbital—for associated anxiety and tension**

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®
antispasmodic/sedative/antiflatulent

ring peeper (tree frog, *Hyla crucifer*):
is small amphibian can expand
throat membrane with air until it is
ice the size of its head.

(Continued from Page 764)

Windham, Samuel W., present Dothan to 1922 Fairview Avenue, Dothan, Alabama 36301.

Jackson County

Cromeans, Joe G., present Scottsboro, to 507 Harley, Scottsboro, Alabama 35768.

Hodges, Durwood M., present Scottsboro, to 307 Parks Avenue, Scottsboro, Alabama 35768.

Jefferson County

Bancroft, Josiah D., present Birmingham to 1909 Laurel Road, Birmingham, Alabama 35216.

Bearman, Alvin J., present Birmingham to 7916 South 2nd Avenue, Birmingham, Alabama 35206.

Bowen, Robert K., Jr., present Birmingham to 2795th Hospital-Box 509, Robins AFB, Georgia 31093.

Brummett, Chester C., present Birmingham to 700 Princeton Avenue, S.W., Birmingham, Alabama 35211.

Carmichael, Daniel E., present Birmingham to 944 South 18th Street, Birmingham, Alabama 35205.

Cooley, Harold N., present Birmingham to 1322 North 31st Street, Birmingham, Alabama 35234.

Elliott, Claire B., present Birmingham to 4260 Sharpsburg Drive, Birmingham, Alabama 35213.

Finchum, Robert N., present Birmingham to 801 Princeton, Avenue, S.W., Birmingham, Alabama 35211.

Giles, Charles H., present Birmingham to 1615 North 25th Street, Birmingham, Alabama 35234.

Hicks, Guy M., present Birmingham to 1601 South 6th Avenue, Birmingham, Alabama 35233.

Jordan, John S., present Birmingham to 800 Montclair Road, Birmingham, Alabama 35213.

Kilic, Nizamettin, present Birmingham to 4616 Montevallo Road, Birmingham, Alabama 35210.

McDaniel, Millie M., present Birmingham to 1919 South 7th Avenue, Birmingham, Alabama 35233.

Merck, Daniel E., present Birmingham to 217 Professional Office Bldg., 801 Princeton Avenue, S. W., Birmingham, Alabama 35211.

Mullins, Charles E., present Birmingham to 1100 Bankhead Hwy., S.W., Graysville, Alabama 35073.

Pitts, William R., present Pleasant Grove to 1919 South 7th Avenue, Birmingham, Alabama 35233.

Romine, William O., present Birmingham, to 701 Princeton Avenue, S.W., Birmingham, Alabama 35211.

Samuels, Joseph W., Jr., present Birmingham to 1919 South 7th Avenue, Birmingham, Alabama 35233.

Wallace, Samuel H., Jr., present Birmingham to 4018 Spruce Street, Philadelphia, Pennsylvania 19104.

Wells, Clay N., present Berkley, California to 5518 Noland Avenue, New Orleans, Louisiana 70114.

Wingo, Douglass, present Birmingham to 811 Woodward Building, Birmingham, Alabama 35203.

Lee County

Simmons, Eldridge C., present Auburn to 718 East Samford Avenue, Auburn, Alabama 36830.

Lowndes County

Meadows, Henry H., Jr., present Hayneville to P. O. Box 367, Hayneville, Alabama 36040.

(Continued on Page 772)

DOXIDAN® The Logical Laxative

To relieve constipation during pregnancy . . .

A time of circulatory stress

Doxidan gently relieves constipation in prepartum or postpartum patients and reduces the hemodynamic burdens of straining at stool.

gently . . . a highly effective fecal softener

predictably . . . a gentle peristaltic stimulant

economically . . . Doxidan costs less per effective dose*

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Give at bedtime for two or three days or until bowel movements are normal.

Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

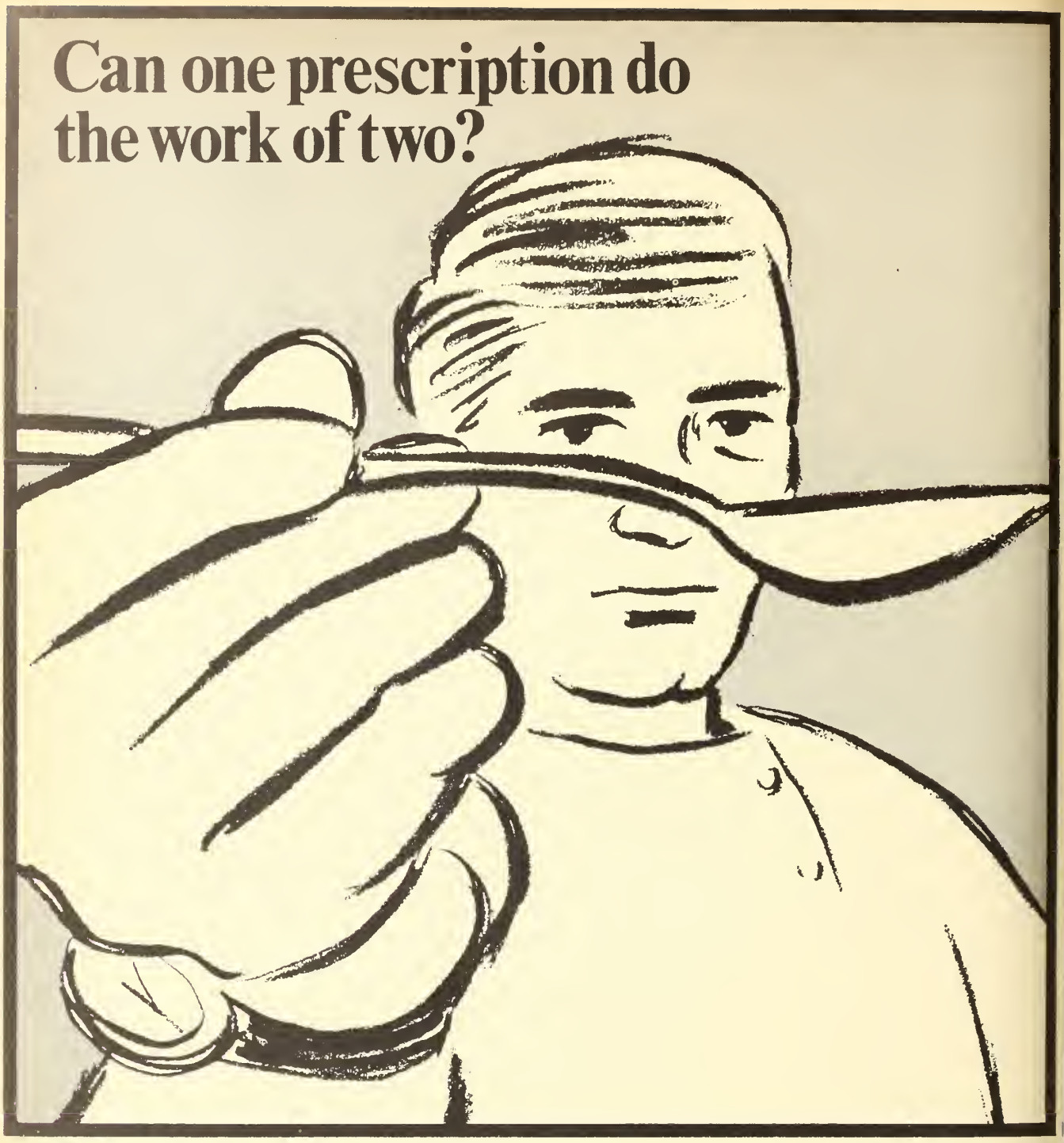
DOXIDAN® The Logical Laxative

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-143

*based on actual drug store survey of prescribed dosages.

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain
aluminum hydroxide/magnesium hydroxide, and
Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

0-2572 (2172)

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

(Continued from Page 768)

Madison County

Arrington, Thomas H., present Huntsville to 401 Lowell Drive, Huntsville, Alabama 35801.

Bryson, Roscoe E., present Huntsville to 101 Sivley Road, Huntsville, Alabama 35801.

Corley, William S., present Huntsville to 401 Sivley Road, Huntsville, Alabama 35801.

Frierson, Wallace B., present Huntsville to 800 Gallatin Street, Huntsville, Alabama 35801.

Goodson, William H., Jr., present Huntsville to 218 Randolph Avenue, S.E., P. O. Box 394, Huntsville, Alabama 35801.

Marcus, Elliot L., present Huntsville to 401 Lowell Drive, Huntsville, Alabama 35801.

Mobile County

Hinton, Lawrence H., present Mobile to 1626 Springhill Avenue, Mobile, Alabama 36604.

O'Gwynn, John C., III, present Mobile to 120 Louiselle Street, Mobile, Alabama 36607.

Morgan County

Hames, Harold E., present Hartselle to Medical Arts Building, West Pine Street, Hartselle, Alabama 35640.

Tuscaloosa County

Brahen, Louis, present Tuscaloosa to 1102 Woodland Hills, Tuscaloosa, Alabama 35401.

Walker County

Noguera, John F., present Quinton to Sumiton Medical Office, Sumiton, Alabama 35148.

There is an art of reading, as well as an art of thinking, and an art of writing.

—Isaac D'Israeli (1766-1848)

Successful Living In 1692

Someone whose name will never be known wrote a statement of philosophy in 1692, which was discovered centuries later in an old Maryland church. Still preserved, it is entitled "Desiderata," Latin word for "anything desired as essential or needed." The author's counsel includes these admonitions:

Go placidly amid the noise and haste. As far as possible without surrender, be on good terms with all others. Speak your truth quietly and clearly. Listen to others, even the dull and ignorant; they too have their story.

Enjoy your achievements as well as your plans. Keep interested in your own career, however humble. Exercise caution in your business affairs, for the world is full of trickery. But let this not blind you to what virtue there is; many persons strive for high ideals, and everywhere life is full of heroism.

Be yourself. Especially do not feign affection. Neither be cynical about love, for in the face of all aridity and disenchantment it is as perennial as the grass.

Take kindly to counsel of years, gracefully surrendering the things of youth. Nurture strength of spirit to shield you in sudden misfortune. But do not stress yourself with imaginings. Many fears are born of fatigue and loneliness. Beyond a wholesome discipline, be gentle with yourself.

With all its sham, drudgery and broken dreams, it is still a beautiful world. Be careful. Strive to be happy.

—Illinois Medical Journal

Friendship is the highest degree of perfection in society.

—Montaigne (1533-1592)

when an unnerving experience compounds the pain

the compound analgesic that calms instead of caffeinates

In addition to pain, this patient has experienced anxiety, fear, embarrassment, and frustration. No doubt these psychic factors actually increased her perception of pain. Surely the last thing she needs is an analgesic containing caffeine. The logical choice is Phenaphen with Codeine. It provides a quarter grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can control the pain more effectively. It's no accident that the Phenaphen formulations contain a sedative rather than a stimulant. Don't you agree, Doctor, that psychic overlay is an important factor in most of the accident cases you see?

Phenaphen®
with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming). **Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.
A. H. Robins Company, Richmond, Va.

A·H·ROBINS

'head clear upon arising'

For upper respiratory allergies and infections including the common cold, Dimetapp Extentabs® effectively relieve the stuffiness, drip and congestion all night and all day long on just one Extentab every 12 hours. For most patients drowsiness or overstimulation is unlikely.

prescribing information appears on next page

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

Dimetapp® Extentabs®

Dimetane® (brompheniramine maleate), 12 mg., phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg

Dimetapp Extentabs®

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.
CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.
WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

D. C. Doctors Battle Smoking

The Medical Society of the District of Columbia, in mid-January, launched a new offensive against smoking. It called for a ban on smoking in public schools, an end to cigarette sales in hospitals, and for separate hospital facilities for patients sensitive to cigarette smoke.

The Society also asked that physicians place "No Smoking" signs in their offices, that the government stop using tax dollars to promote the U. S. tobacco industry, and that the Federal Aviation Administration and Congress approve petitions and bills for either separate smoking compartments or smoking bans aboard commercial airliners.

Joining the Society were 60 public and private organizations comprising a D. C. Council on Smoking. In addition to all-out educational promotions, physicians and ministers staffed four five-day withdrawal clinics, sponsored by the Seventh-Day Adventist Church.

Where The Action Is

The National Chamber is an instrument of change—not the status quo. At the local level, there's no more natural organization to serve as the community's instrument for change and action than the local chamber. Chambers of commerce promote change, rather than resist it. They instigate, lead and foster change.

—Arch N. Booth,
executive vice president,
C. of C. of U. S.

We should live and learn; but by the time we've learned, it's too late to live.

—Carolyn Wells

INDEX TO ADVERTISERS

Arch Laboratories 705

Blue Cross-Blue Shield ..... 3rd Cover
The Bradley Center 771
Bristol Laboratories 706, 707
Burroughs Wellcome 741, 742

Campbell Soup 727

Geigy Pharmaceuticals 693
Guest House Motel 751

Highland Hospital 705
Hoechst Pharmaceuticals 769

Lederle Laboratories 776
Eli Lilly & Company ..... 1st Cover, 708

Medicenters of America 744
Wm. S. Merrell 770

National Drug Company 699, 700, 703, 704

Wm. P. Poythress 747, 748, 761, 762

A. H. Robins 738, 739, 733, 774, 775
Roche Laboratories ..... 690, 691, 701, 754, 755, 763, 4th Cover

Julius Schmid 736, 737
G. D. Searle 728, 729
Stuart Pharmaceuticals 730, 766, 767

Edward Taylor, Ltd. 759

Upjohn Company 740, 750, 751
USV Pharmaceuticals 696, 697

of the tetracycline-nystatin products

...none is lower priced

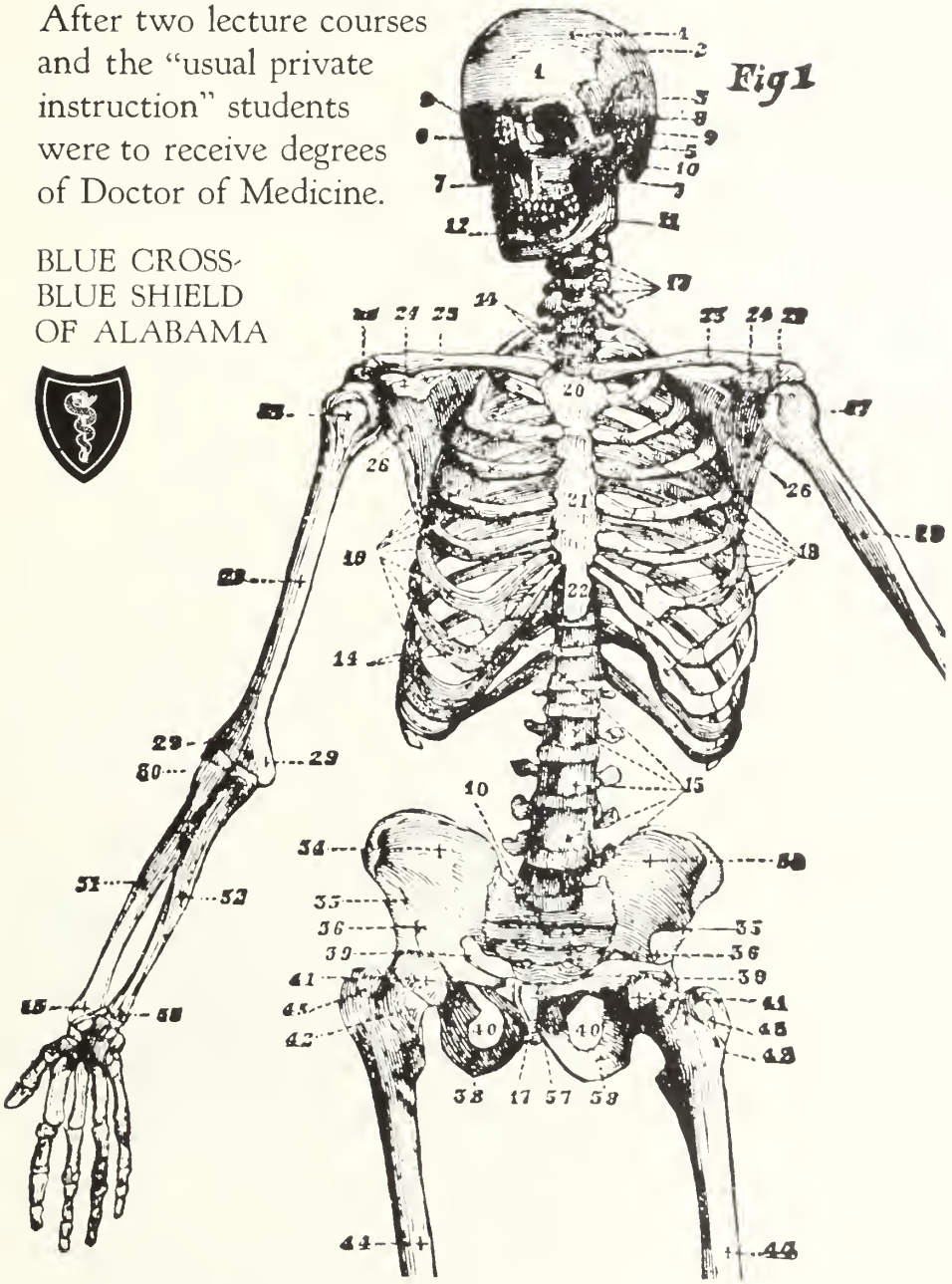
TETRACYCLINE HCl 25 mg. NYSTATIN 25,000 U./cc.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

37

In 1845 the Alabama Legislature authorized the establishment of a Medical College. After two lecture courses and the "usual private instruction" students were to receive degrees of Doctor of Medicine.

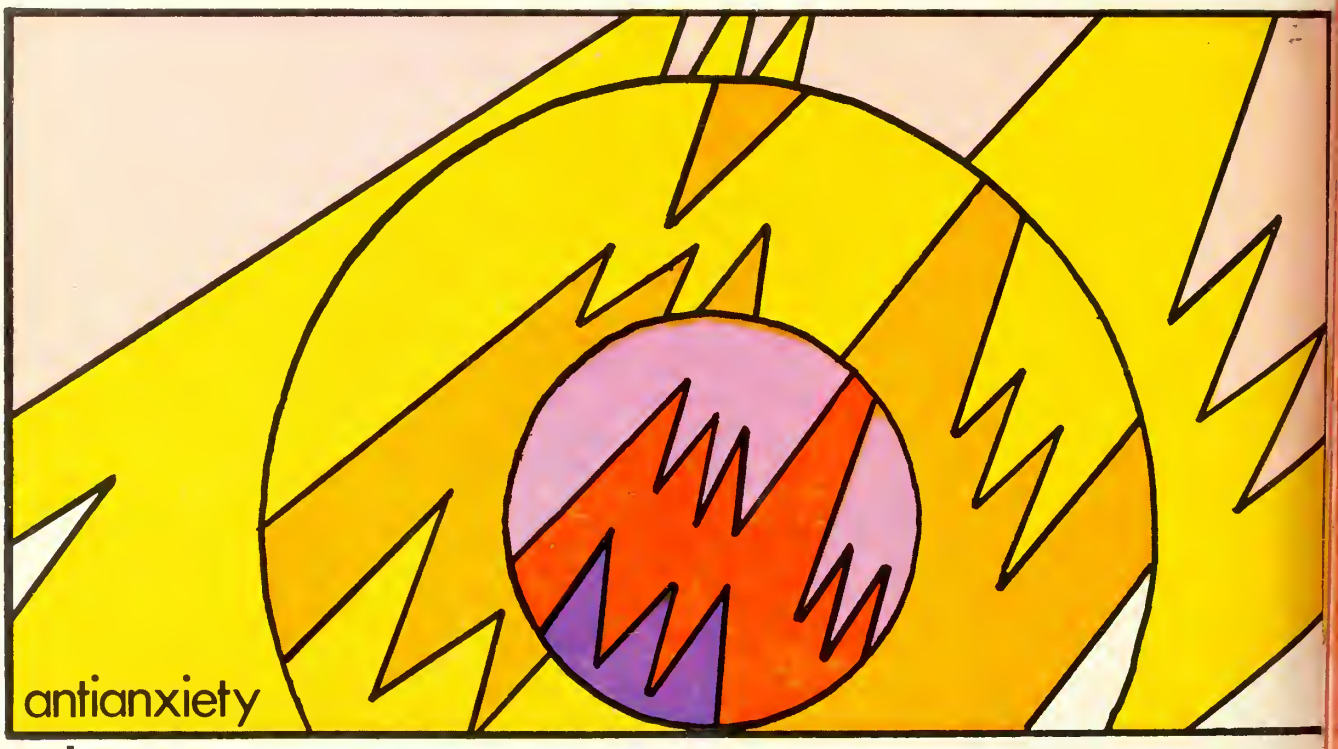
BLUE CROSS-
BLUE SHIELD
OF ALABAMA



anxiety: a time bomb

Unless "defused," anxiety may build up to an intensity that can overwhelm the patient's inner defenses. Also, in one weakened by chronic illness or surgery, excessive anxiety may provoke or aggravate symptoms and interfere with recovery.

The antianxiety action of Librium (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in many fields of medical practice where anxiety complicates the patient's condition.



Librium®
(chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules up to 100 mg daily for severe anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG pattern (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

JOURNAL of the Medical Association of the State of ALABAMA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
23 JUN 1971

IN THIS ISSUE

Radiology - The Utilization of a Technology . . 797

Biologic Factors In Ethology 800

Alabama's Babies 816

Simple, accurate test for glycosuria

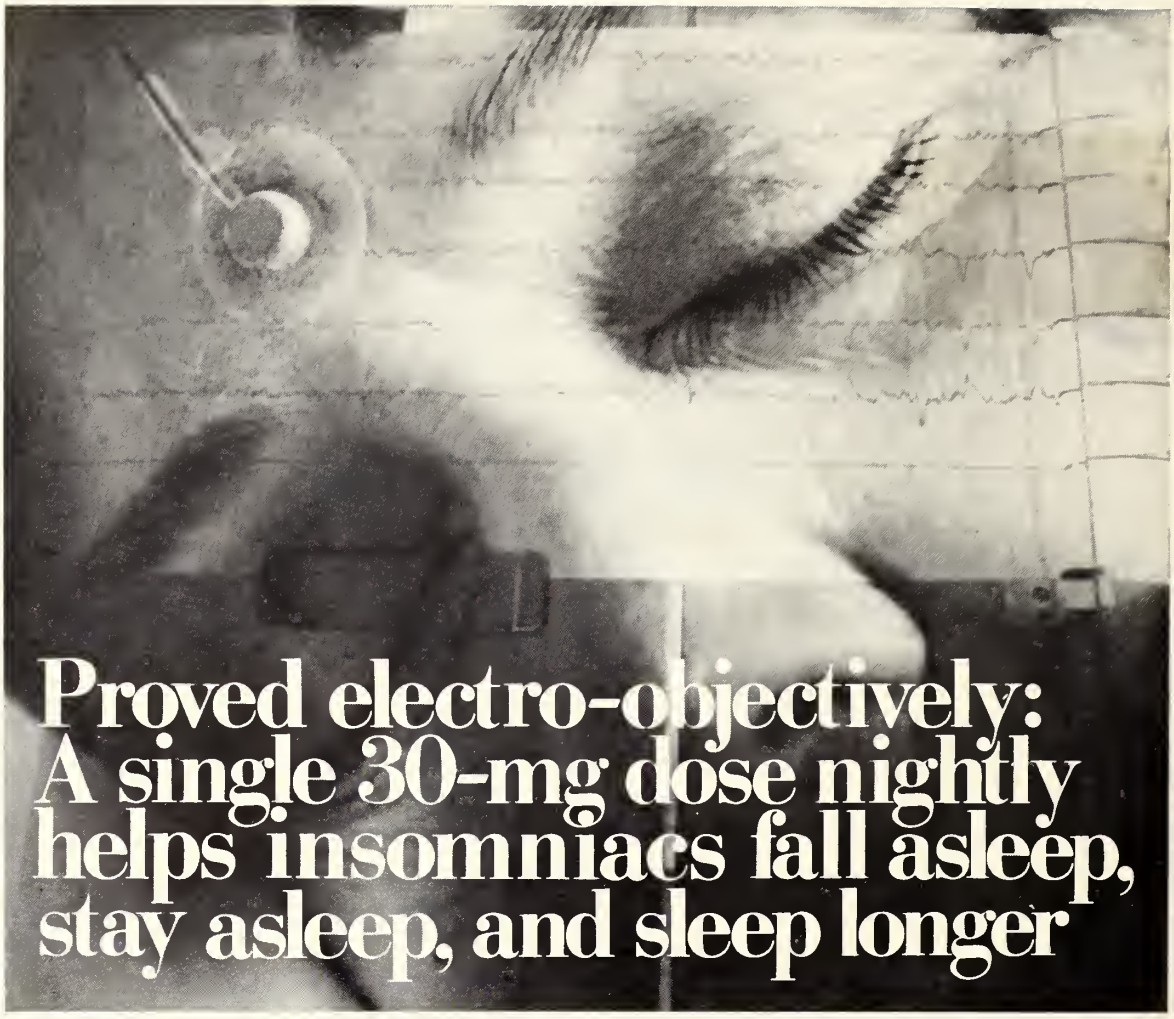
TES-TAPE®
URINE SUGAR ANALYSIS PAPER

Lilly
Leadership in Diabetes Research for Half a Century

Additional information available upon request. Eli Lilly and Company, Indianapolis, Indiana 46206
100133

Francis A. Countway Library of Medicine
10 Shattuck St.
Boston, Massachusetts 02115

JUNE 1971



Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

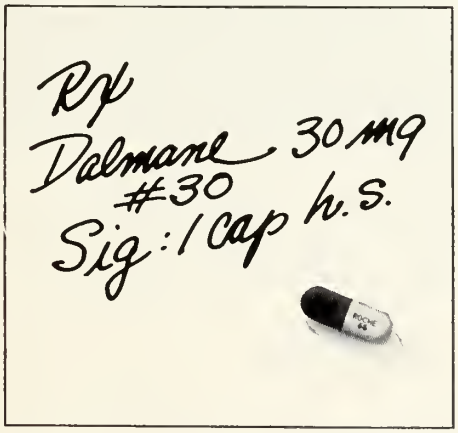
THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
23 JUN 1971

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

References: 1. Kales, A., *et al.*: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.*: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.



For the sleep your patients need

New **Dalmane®**
(flurazepam hydrochloride)

Before prescribing, please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THE JOURNAL

of the

Medical Association of the State of Alabama

Volume 40 • June, 1971 • No. 12

Office of Publication
19 So. Jackson St. Montgomery, Ala. 36104
Subscription Price $5.00 Per Year
$1.00 Per Copy

Second Class Postage Paid at Montgomery, Alabama. Published monthly in Montgomery at 19 South Jackson Street.

Editor-in-Chief
William L. Smith, M. D. Montgomery

Managing Editor
L. P. Patterson Montgomery

Assistant Managing Editor
Mary Nell Williford Montgomery

Publications Committee
Archie E. Thomas, M. D., Chairman Montgomery
C. Kermit Pitt, M. D. Decatur
H. H. Hutchinson, M. D. Montgomery
William L. Smith, M. D. Montgomery
L. P. Patterson Montgomery

Officers of the Association

President
Archie E. Thomas, M. D. Montgomery

President-Elect
F. M. Phillippi, Jr., M. D. Brewton

Vice-Presidents
J. E. Cameron, M. D. Alexander City
Wood S. Herren, M. D. Birmingham
R. E. Foy, Jr., M. D. Enterprise
W. T. Wright, M. D. Mobile

Secretary-Treasurer
William L. Smith, M. D. Montgomery

Executive Director
L. P. Patterson Montgomery

The State Board of Censors
John M. Chenault, M. D., Chmn. Decatur
J. P. Collier, M. D. Tuscaloosa
Paul W. Burleson, M. D. Birmingham
L. L. Hill, M. D. Montgomery
M. Vaun Adams, M. D. Mobile
J. D. Bush, M. D. Gadsden
E. L. Strandell, M. D. Brewton
John W. Davis, Jr., M. D. Montgomery
J. Garber Galbraith, M. D. Birmingham
H. G. Hodo, M. D. Fayette

State Health Officer
Ira L. Myers, M. D. Montgomery

Delegates and Alternates to the American Medical Association
(Terms expiring December 31 of year shown.)

1971
Delegate—M. Vaun Adams, M. D. Mobile
Alternate—E. L. McCafferty, Jr., M. D. Mobile

Delegate—P. W. Burleson, M. D. Birmingham
Alternate—Robert Parker, M. D. Montgomery

1972
Delegate—E. Bryce Robinson, Jr., M. D. Fairfield
Alternate—W. E. White Anniston

1973
Delegate—O. Emfinger, M. D. Union Springs
Alternate—E. B. Glenn, M. D. Birmingham

Delegate—Paul W. Burleson, M. D. Birmingham
Alternate—J. Michaelson, M. D. Foley

CONTENTS

President's Page 780

The Woman's Auxiliary 782

Editorial Comment 787

Remember When Knighthood Was In Flower? 787

An M. D. As Dictator On A Caribbean Island 787

Guest Editorial, The Practice of Dermatology 788

'Professional Negligence' Discussed by Attorney 795

Scientific Section 797

Radiology—The Utilization Of A Technology, R. E. Foy, M. D., Enterprise 797

Biologic Factors In Ethology, Wallace Marshall, M. D., Montgomery 800

Around the State 809

Vital Statistics 809

Fathers and Sons in Medicine 811

Mobile to Selma In Four Generations 811

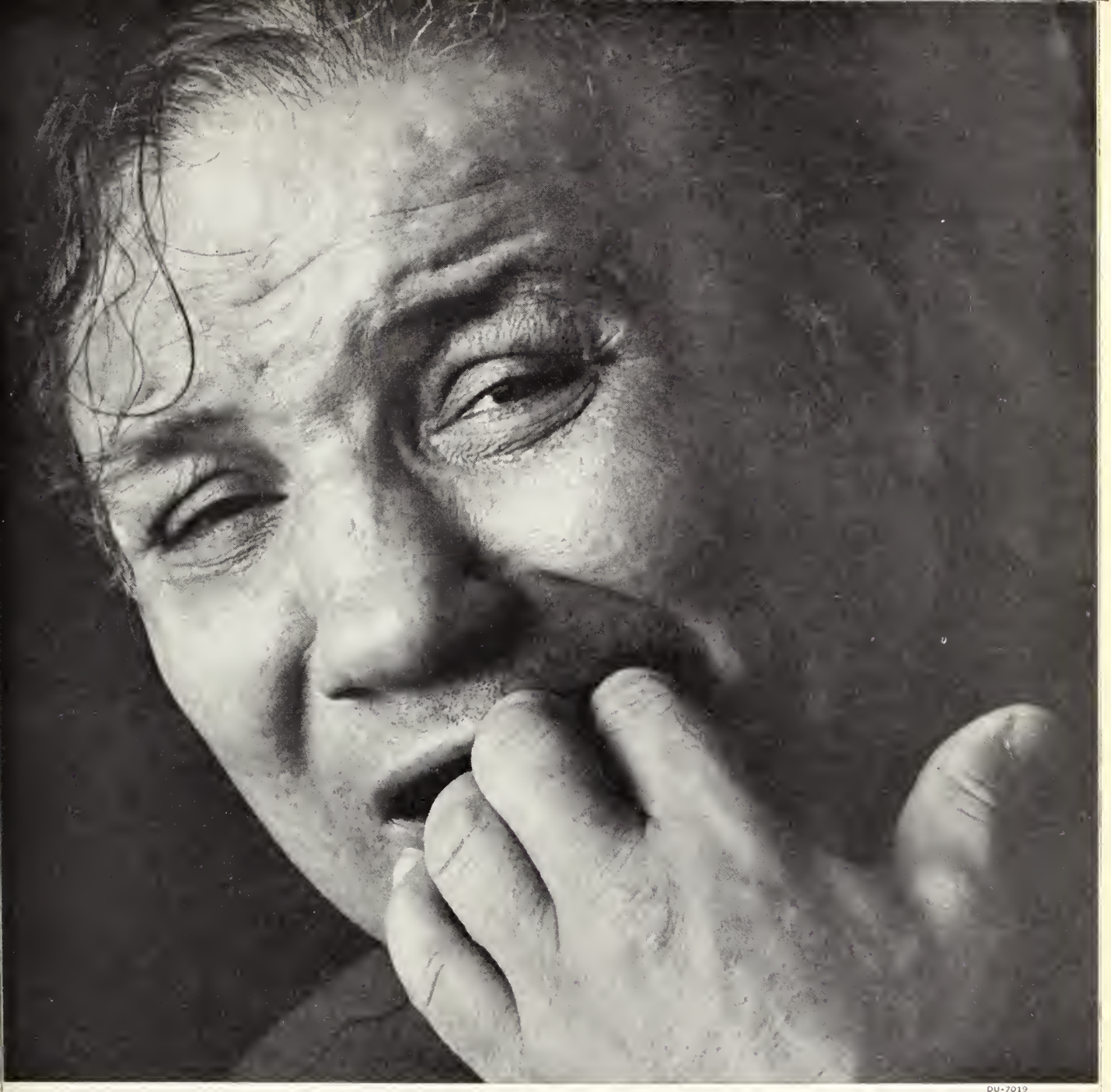
Commercially Sponsored Awards Jettisoned 815

Alabama Department of Public Health 816

Alabama's Babies, Harold H. Klingler, M. D., Montgomery 816

Index to Volume 40 822

Physician Placement Service In Alabama 834



DU-7019

Who's afraid of the big bad enema?

We all are. But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can – except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents", and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable

bisacodyl

President's Page

Archie E. Thomas, M. D.

Most any direction we take, the sky looks very gloomy. Our government is under attack on all fronts and medicine is certainly no exception.

We felt that in order to get most of the problems before the entire organization, it would be wise to call all the trustees and committee chairmen together to review the problems and make recommendations for the coming year. We had such a meeting on May 9. Of course Dr. Emfinger's program will be continued as far as practical. The most pertinent problem that we have before us is the liability INSURANCE problem.

Quoting Mr. Truman Hobbs, president of the Alabama Bar Association, he states that in the last ten years there has not been a single verdict against a doctor for medical malpractice in Montgomery County. The local circuit clerk advises that no more than six such suits have been filed in the past ten years.

Clerks of courts representing 38 of the 67 counties in Alabama, including Jefferson, Mobile, Madison, Montgomery and Tuscaloosa have responded to quick questions posed to all the clerks. They have advised that in the past three years no more than 27 medical malpractice suits have been filed in all the 38 counties.

On the average this is approximately one such suit a year for every 300 practicing lawyers in Alabama.

Only two jury verdicts have been rendered against a doctor in all the 38 counties for the past three years. A number of clerks indicated that to their knowledge no medical malpractice suits have ever been filed in their counties. Only six medical malpractice cases have reached the Supreme Court of Alabama in the past 20 years. In only one of these was a verdict rendered against a doctor, and the injured party in that case was awarded damages in the total sum of $1,000.

Assuming all the above is factual, now why have our rates gone up so much? Before we leave the lawyers, could it be that the carrier and the lawyer are only too glad to settle out of court? You know what happens to insurance when this happens.

Mr. T. B. Hill, speaking to the Medical Association of the State of Alabama in Birmingham, had this to say to the young and the old doctor.

He stated that he would like to bring to our attention some of the many legal snares

and pitfalls which are ever present and which can and often do precipitate actions for damages against members of the medical profession for alleged malpractice. And I use the term "alleged" advisedly, for I must reluctantly confess that very often in this field we find cases filed against doctors by unscrupulous persons, which are shown upon trial to be wholly without foundation, in fact, and which are filed in the hope of forcing a settlement from the doctor or his insurance carrier to avoid the embarrassing publicity of a trial.

Lawyers as a whole are very gifted at pinpointing the cause of the crime. Doctors work equally as hard to find the cause of disease. Malpractice insurance continuing as it has in the last few years will destroy medicine as we have known it in Alabama. I am sure the legal profession would be the first to join hands with us in the preservation of our profession.

Dr. C. A. Lightcap, Chairman of the Committee on Insurance and his committee are working diligently to correct this situation and the above statements are the most valuable information that we have received and will be most helpful in pinpointing the cause of the trouble.

Dr. Lightcap spoke of the possibility of the AMA having found a carrier that will be cheaper than our present carrier.

All of my Committee Chairmen are working diligently for the common cause and you will be hearing from them through the year.

Respectfully submitted,
Sincerely yours,

Archie E. Thomas, M. D.
President

Hill Crest
HOSPITAL
Hill Crest Foundation, Inc.

7000 5th AVENUE SOUTH
Box 2896, Woodlawn Station
Birmingham, Alabama 35212
Phone: 205 - 836-7201

A patient centered not for profit hospital for intensive treatment of nervous disorders . . .

Hill Crest Hospital was established in 1925 as Hill Crest Sanitarium. Individual patient care has been the theme during its 46 years of service.

Both male and female patients are accepted and departmentalized care is provided according to sex and the degree of illness.

In addition to the psychiatric staff, consultants are available in all medical specialities.

MEDICAL DIRECTOR:
James K. Ward, M.D., F.A.P.A.

CLINICAL DIRECTOR:
Hardin M. Ritchey, M.D., F.A.P.A.

HILL CREST is a member of:
AMERICAN HOSPITAL ASSOCIATION . . . NATIONAL ASSOCIATION OF PRIVATE PSYCHIATRIC HOSPITALS . . . ALABAMA HOSPITAL ASSOCIATION . . . BIRMINGHAM REGIONAL HOSPITAL COUNCIL.

HILL CREST is fully accredited by the joint commission on Accreditation of Hospitals and is also approved for Medicare patients.

Hill Crest
HOSPITAL
BIRMINGHAM, ALABAMA

The Woman's Auxiliary

President, Mrs. Gilder L. Wideman
President-Elect, Mrs. George Hansberry
Northwest District Vice President, Mrs. Donald J. O'Brien
Northeast District Vice President, Mrs. Fred C. Ballard
Southeast District Vice President, Mrs. J. E. Dunn, Jr.
Southwest District Vice President, Mrs. J. Watson Maxwell
WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Who's Interested In Your Wife?

The recent flood of articles, books and movies depicting the private lives of M. D. wives has been a surprise to your wife. That anyone would be interested has been a shock. More surprising is that such pornographic versions are presented. We know (you know also) that as a group we are shy, conservative, even dull.

The fact is that the public is interested in us. This curiosity stems from the truth that we share your private lives. Your work makes you interesting. Thus the deduction that your home life must be equally exciting.

Others are developing the public image of the doctor's wife (and your private life). This image is being widely accepted. We have allowed others to tell our story. They are not bound by the truth. You are being undermined through your wife.

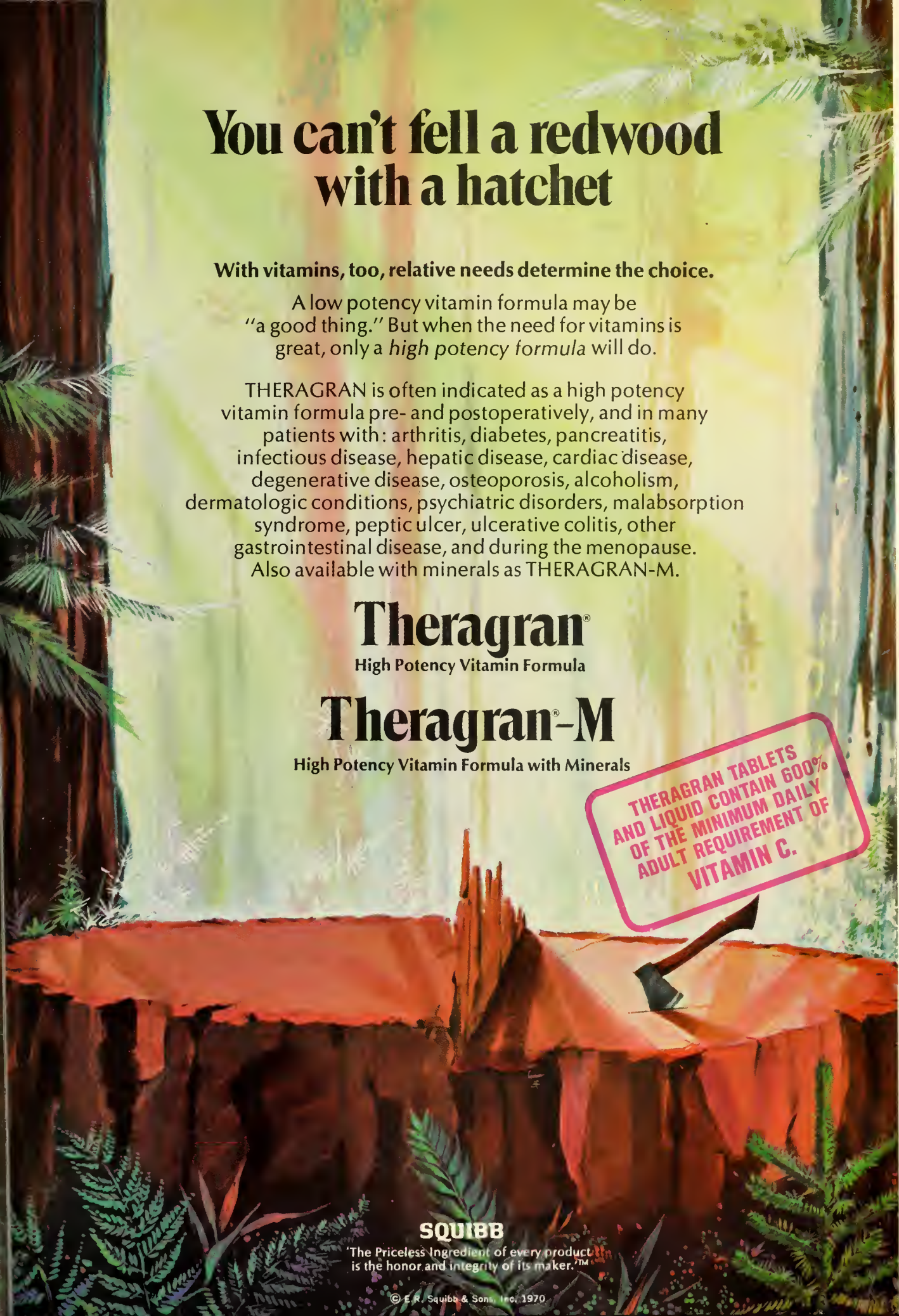
The fault of this dilemma lies with you—the doctor—and with me—the doctor's wife. You have kept your eye on the temperature chart and your ear to the stethoscope. Your wife has changed the diapers, cooked the food and driven the carpools. You and your wife have served on church, school and community projects. You and I are identified as individuals, not as representatives of medicine's ideals, ethics and philosophy. We have not utilized our own public relations appeal.

National pool takers report that M. D.s are respected as individuals but disliked and mistrusted as a group. How long, with present trends continuing, will you be respected as individuals? Businessmen learned long ago the importance of good public relations. Isn't it time you took a leaf from the businessman's book and created the true image of men of medicine? Your wives will work with you.

Mrs. Gilder L. Wideman

Your Auxiliary confesses that it is not an expert on public relations. We do know that the same PR experts used by business are available to us. We will find these experts if you wish. Being physician wives though we are short of funds. If you instruct we will organize a P. R. seminar, workshop or

(Continued on Page 792)


You can't fell a redwood with a hatchet
With vitamins, too, relative needs determine the choice.
A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a high potency formula will do.
THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.
Theragran®
High Potency Vitamin Formula
Theragran®-M
High Potency Vitamin Formula with Minerals
THERAGRAN TABLETS AND LIQUID CONTAIN 600% OF THE MINIMUM DAILY ADULT REQUIREMENT OF VITAMIN C.
SQUIBB
"The Priceless Ingredient of every product is the honor and integrity of its maker."™
© E.R. Squibb & Sons, Inc. 1970

The get-up-and-go summer cold and allergy pill.

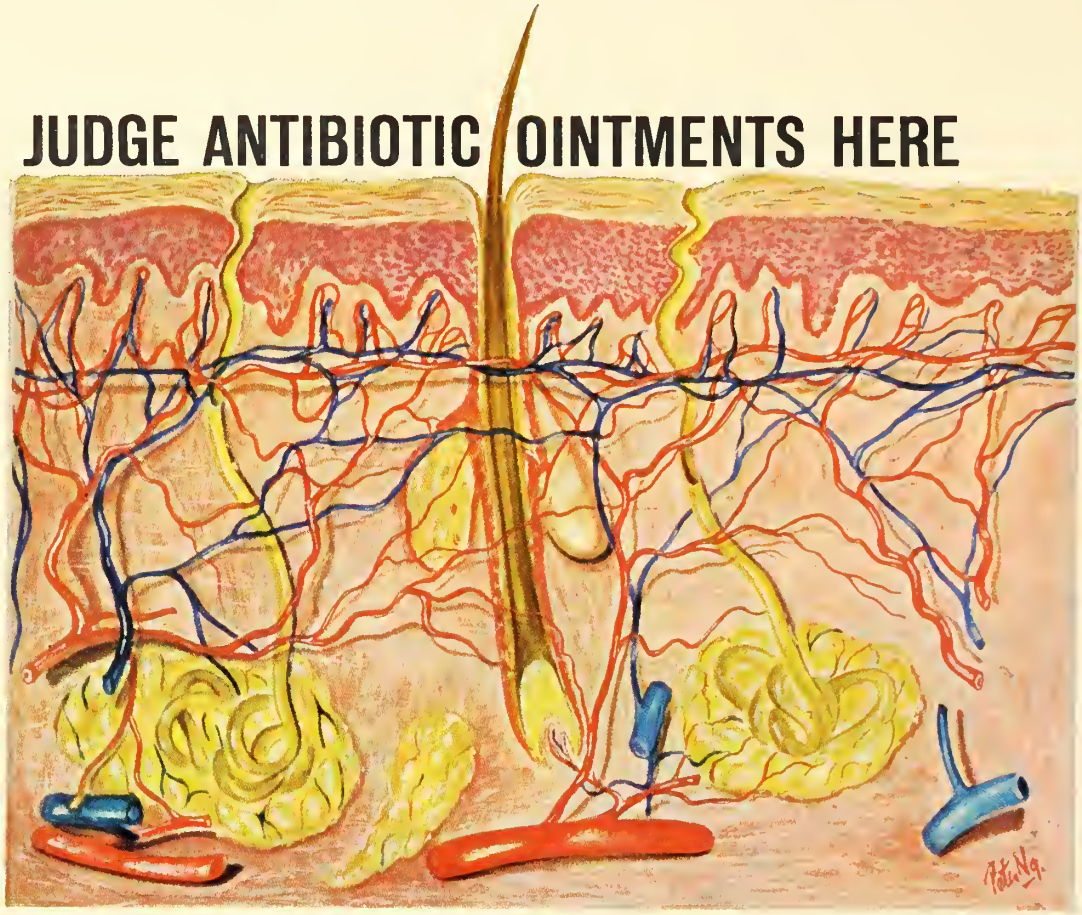
Novahistine LP can help your patients get out and enjoy themselves in spite of allergic rhinitis, hay fever or summer colds. And even when nasal congestion is caused by repeated allergic episodes, Novahistine LP can usually give prompt and long-lasting relief. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. And convenient, twice-a-day dosage lets most patients enjoy relief all day and all night. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine®
LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Editorial COMMENT

Remember When Knighthood Was In Flower?

In this day of besmirched icons, of smashed idols, of shattered symbols, is it any wonder that the image of medicine suffers?

There was a time when the Fildes painting of the family physician watching a little girl through a dangerous crisis approached the status of a Greek church icon. The furnishings of no doctor's waiting room were complete without it.

Then came the grinning cynic to suggest: "That's about all he could do—watch and pray."

The age of romanticism was followed by the time of the muckrakers, the era when best-sellers were busy exposing the feet of clay on the heroes of history. The day "when knighthood was in flower" slowly faded into the epoch of the hoodlum.

Picture the squad of Marines at sunset retreat, reverently and proudly lowering the Stars and Stripes from its flagstaff, and contrast it with the bearded demonstrator marching up a Washington avenue, the flag upside-down on his shoulder and dragged contemptuously in the dirt at his heels. The frightening thing is that he marches with impunity, apparently without one word of protest.

A caricaturist of today might redraw the likeness of the Fildes physician, by deft metamorphosis changing the child into the golden calf that Moses found at the foot of Sinai.

It has become as popular to maul the face of medicine at home as it has to tweak the nose of Uncle Sam abroad. And the time for a change may be running short.

An M. D. As Dictator On A Caribbean Island

Medicine is one of the "learned" professions, one of the *earned* doctorates. In that light, the M. D., the Ph. D., the J. D., and the Th. D. are akin. They've had to work longer and harder for their degrees. And, once earned, their life's work was (and is) cut out for them—in theology or philosophy, in the law or in medicine.

But in this world of philosophical equality their kinship ends when they go to work. And none of the other three is the "equal" of medicine as it labors in the area of the sick bed and the hospital ward.

As the ribald Rabelais put it, "The devil was sick, the devil a monk would be!"

An M. D. died the other day in the Island Republic of Haiti, a complete reversal of the old biblical allegation that "a prophet is not without honor save in his own country." Outside Haiti, Francois Duvalier was known as a conscienceless dictator surrounded by an army of killers. To the home folk he was still "Papa Doc" and teevee dutifully recorded the loud lamentations of mourners passing his casket as he lay in state.

After graduating in 1934 from Haiti's medical school, and taking postgraduate work at the University of Michigan, Duvalier re-

turned to his beautiful and poverty-stricken homeland to battle the yaws, which Britannica describes as "A highly contagious inoculable tropical disease . . . that is neither hereditary nor congenital."

Newspaper obituaries published at the time of his death declared that this dedication to war on a disease "affecting most of the peasant population" was the key to his rise to power. The continuing popularity of his nickname is the proof of it.

It is a modern example of the ancient promise in Ecclesiastes: "Cast your bread on the waters . . ."

Or perhaps there is significance in the fact that the heads of state of two rival nations sharing the same island—Trujillo in Spanish-speaking Dominica and Duvalier in French-speaking Haiti—both received training in the United States: Duvalier in medicine at Michigan, Trujillo in soldiering in the United States Marine Corps.

GUEST EDITORIAL

The Practice Of Dermatology

The acceleration of change in medicine must not separate the physician from his patient by allowing physician-aides to become a barrier to the doctor-patient relationship. This view is not to minimize the need for physician assistants but is to emphasize the responsibility of the physician to train his assistants to relate to each other and to himself as a team which is united in the spirit of rendering service to patients. Dermatology lends itself to a large out-patient practice and requires one to relate to patient-needs as rapidly as possible.

The most helpful assistant is one who not only meets the mechanical needs of the office and the physical needs of the patient but one who shows a sincere interest in each patient. This blend of behavior and attitude which enables a patient to feel that everyone in the physician's office cares about his well-being is both good public relations and good therapy. It helps to set the stage for getting to the heart of the problem in the shortest period of time. The relaxed atmosphere must not be at the expense of efficiency. The efficient use of time and motion in every task performed contributes to the relaxed atmosphere whereas the patient is much more likely to feel rushed in the inefficient office.

Patients who find themselves surrounded by technical advances in their home and work environments tend to look for dramatic solutions to their illnesses. One of the greatest services a dermatologist can render to the patient with chronic skin disease such as Psoriasis or chronic neurodermatitis is to take a few minutes and provide the patient with a better understanding of his disease.

Chronic skin disease can produce significant social and occupational disability. Although there are general principles which can be followed in the topical treatment of this group of diseases, specific management must be designed to meet the needs of the individual patient. In general, topical corticosteroids are the treatment of choice in the absence of secondary infection. Psoriasis, chronic neurodermatitis and chronic seborrheic dermatitis are the chronic inflammatory diseases most frequently encountered in my office. In the absence of secondary infection, topical cortico-steroid therapy can prove helpful in inducing remissions. Psoriasis is more resistant to treatment but especially on the face, ears and scalp topical cortico-steriod therapy can be useful in this disease also. I have found the following topical preparation particularly helpful in improving Psoriasis of the scalp.

Valisone Cream		45.
Aqua	qs	120.

Dispense in a wide-mouth bottle.

(Continued on Page 790)

HELP! IN SWIMMER'S EAR,

help comes fast with Furacin Otic. Diperodon hydrochloride provides rapid relief of pain and pruritus . . . antibacterial Furacin (nitrofurazone) and antimycotic Micofur (nifuroxime) combat the susceptible pathogens. The nonmacerating, hygroscopic vehicle softens cerumen . . . penetrates to the infection . . . permits free drainage.

FURACIN® OTIC

(nitrofurazone)

antibacterial/anesthetic/antifungal

Formula: Contains (w/w) 0.2% Furacin, brand of nitrofurazone, 0.375% Micofur®, brand of nifuroxime, and 2% diperodon hydrochloride dissolved in water-soluble, nondrying, hygroscopic polyethylene glycol.

Indications: For treatment of bacterial otitis externa, bacterial otitis media and otomycosis. In otitis media, this preparation is not effective if the tympanic membrane is intact.

Furacin (nitrofurazone) and Micofur (nifuroxime) are active against a variety of gram-positive and gram-negative organisms. Activity versus Pseudomonas sp. is limited to certain strains. Micofur (nifuroxime) is active against Candida (Monilia) albicans.

Precautions: Sensitization may occur with prolonged use and is more likely to develop in eczematous otitis externa. To minimize such reactions (a) limit application to a week or less, and (b) avoid use of excessive amounts which may run down the face.

This preparation is not indicated for use in treatment of cholesteatoma, where surgical intervention is necessary.

Supplied: Bottle of 15 cc. with dropper.

™ Originators and Developers of The Nitrofurans
EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK 13815

(Continued from Page 788)

In Psoriasis, I prefer a lubricating base such as found in Synalar Emollient or Synalar Ointment and Valisone Cream or Valisone Ointment. Over less responsive skin areas, such as the extremities and trunk, topical cortico-steroid therapy can be enhanced either by the use of occlusive bandaging with Saran wrap or Handi-wrap overnight for two nights, then left open for two nights and repeated or by the use of Cordran tape. Occlusive bandages left in place for longer periods of time may produce folliculitis. Due to the Koebner phenomena, Psoriasis tends to appear in sites of inflammatory reaction or physical trauma in the psoriatic patient. For this same reason, the psoriatic patient which is benefited by proper sunlight exposure may find Psoriasis appearing at the site of a severe sunburn even though the sunburned area was not involved previously with Psoriasis.

Methotrexate has been used in severe Psoriasis that is unresponsive to other methods of treatment but must be used with great caution and, in female patients, only those beyond the childbearing period. Appropriate physical evaluation and laboratory studies must be done prior to the onset of this therapy and continued beyond the time adverse effects from Methotrexate may occur.

Most often the solution in acute dermatoses is found without the aid of the dermatologist. Occasionally, when seemingly appropriate therapy does not bring about clearing of the dermatitis, the dermatologist may be helpful in identifying an acute onset of a rare skin disease such as Pemphigus or the atypical manisfestation of an acute common skin disease such as impetigo which can produce a bullous eruption. Although problem cases may be equally a problem for the dermatologist as the referring physician, the dermatologist's point of view may lead to a new sense of direction in management. All

(Continued on Page 792)

Brief Summary of Prescribing Information– 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

(Continued from Page 790)

physicians find it rewarding to eliminate a single cause and effect a cure but skin disease lends itself to multiple influences in a single illness. The skin as a mirror of internal health is also subject to external causes of disease. With this principle in mind, contact dermatitis on the arms in a patient with a tension state may become neurodermatitis and follow a prolonged recurrent course after cortico-steroid therapy should have produced a cure.

One of the greatest advances in dermatology has been the introduction of 5-Fluorouracil topical treatment for pre-cancerous lesions. Although some patients develop a diffuse erythematous reaction to 5-Fluorouracil, most find that only the skin involved with pre-cancerous change undergoes an inflammatory response which destroys the pre-cancerous epithelium. Pre-cancerous lesions of the face are more responsive to this therapy while similar lesions on the arms are usually less responsive than the face and the back of the hand is even less responsive than the dorsum of the arm. The inflammatory response in the pre-cancerous lesion may be increased by using stronger concentrations of 5-Fluorouracil or by using an occlusive bandage with Saran wrap or similar plastic occlusive bandage. Also, Ultraviolet light may be used to intensify the inflammatory reaction to 5-Fluorouracil.

Although immune mechanisms may eventually be useful in the treatment of skin cancer, today, adequate treatment still consists of either removing or destroying the lesions. A surgical approach, when feasible, is the treatment of choice in my opinion. Irradiation is especially helpful in patients on anticoagulant therapy or when surgery is contraindicated for other reasons.

The hot cautery still has its place in the treatment of pre-malignant lesions such as leukoplakia of the lip and buccal mucosa. Cutting current excision, cauterization or curettage followed by fulguration are adequate measures for treating skin cancer. These methods are particularly useful in elderly patients who must travel long distances and have great difficulty coming to an office for more than one visit.

Cryrotherapy with liquid nitrogen is very useful in the treatment of individual pre-cancerous lesions. Cryrotherapy techniques measuring the margins of tissue destruction are being developed for depths up to one centimeter. This method suggests an increased application of liquid nitrogen therapy in the treatment of skin cancer in the future to perhaps depths even greater than one centimeter.

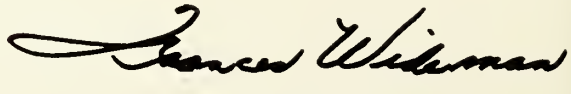
Changes occurring in medicine involve all phases of practice. The physician-assistant must become an integral part of the doctor-patient relationship. Advances in medicine must be phased into patient care but all that is past is not obsolete. Computers and other electronic aids enhance efficiency and effectiveness but do not convey that quality of spirit found among physicians, their assistants and patients who are joined by the spirit of working together for the common good.

—Hugh B. Praytor, Jr., M. D.

THE WOMAN'S AUXILIARY

(Continued from Page 782)

program for M. D.s and wives. We must first know your desires and your willingness to participate in such a seminar, etc. To indicate your interest you must contact your president. Dr. Thomas would follow through by instructing us. We have the time as your Auxiliary. Will you take the time to develop a true image of yourself and your wife?



Frances Wideman
President

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

'Professional Negligence' Discussed By Attorney

"How To Avoid a Malpractice Suit" was the subject of one of Alabama's leading attorneys before an orientation meeting of the Medical Association of the State of Alabama's annual session in Birmingham in April.

Beginning by redefining malpractice as "professional negligence," Thomas B. Hill, Jr., of Montgomery, member of a family that has been prominent in law and politics, medicine and the ministry for four generations, pointed out that accountability is far from recent origin. Four thousand years ago, the Code of Hammurabi set as the penalty for the loss of a free man's life the amputation of the surgeon's forearm. England's first medical malpractice case was six centuries back, in 1374, and the first one in the United States was in Connecticut in 1794. Alabama's first was in 1910.

However, the Alabama law clearly establishes that accountability is not to be equated with infallibility, and the care and skill of a physician or surgeon shall be measured by that of other MDs "in the same general neighborhood." Of course, the speaker said, there are "cases filed against doctors by unscrupulous persons . . . in the hope of forcing a settlement . . . to avoid the embarrassing publicity of a trial."

There is no way for a doctor to escape that situation, but there are rules of the game that will help make court action unlikely, and the Attorney's speech targeted on them. He warned against negligence and venturing into fields beyond the individual doctor's capabilities.

But nearly half of Mr. Hill's paper was devoted to "Informed Consent." The patient, or one empowered to speak for him, must be fully informed of the risks involved, he said, citing numbers of cases to support the fact.

T. B. HILL, JR., Attorney

Even here, however, an emergency to save the life of a child cuts through the red tape.

In conclusion Mr. Hill quoted a tribute to doctors from the Bible book of Ecclesiastes and wished that, in event one of his audience became involved in a malpractice suit, "you may be blessed with an abundance of expert witnesses and an intelligent and understanding jury."

Obstetric-Gynecologic Seminar

"The Seventeenth Annual Southern Obstetric and Gynecologic Seminar will be held this year at Grove Park Inn, Asheville, North Carolina, August 1 through the 7th. The Faculty will include Drs. Bayard Carter and Roy Parker of Duke University; Dr. Robert Greenblatt of Georgia; Dr. Ed Tyler of California; Dr. Abe Mickal of New Orleans; Dr. Robert Ross and Dr. Charles Hendricks of North Carolina. Subjects will include broad aspects of obstetrics and gynecology. Registrants who might be interested, please contact the Secretary, Dr. George T. Schneider, Ochsner Clinic, 1514 Jefferson Highway, New Orleans, Louisiana 70121."

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Volume 40 June, 1971 Number 12

Radiology-The Utilization Of A Technology

R. E. Foy, M. D.

Enterprise, Alabama

There can be no doubt that radiology is becoming an increasingly important aspect of the changing ways of medical service in this country. Both the revolution in technology and the revolution in medical economics have worked together to increase the use of X-ray. The "third party concept" of payment lends itself to the documentation of disease. Unfortunately, X-ray examination is a readily acceptable manner of much documentation. For these and other more beneficial reasons there comes a time when each physician, regardless of his type practice, should review his knowledge of X-ray service. This review should be only profound enough to produce a practical benefit. There are ample opportunities elsewhere for pursuit of esoteric knowledge. The information here presented is meant to assist the physician in understanding and appreciating the complexities of this technology. It is hoped that better communication between the X-ray department and the physician will be possible.

In general, this review will be devoted only to the technological aspects of X-ray service. The more important personnel and managerial aspects of the service are beyond the scope of this article.

A definite attempt will be made to keep terminology at a level of maximal understanding. The technical wording will be exemplified by the abbreviation "KISS." This, of course, stands for the phrase, "Keep it simple, stupid."

Unpleasant as the task may be at the onset, it is necessary to define X-ray. X-rays are ionizing electromagnetic radiation that results from the conversion of kinetic energy carried by electrons into electromagnetic radiation. From this definition it is evident that in each X-ray apparatus there must be a source of moving electrons.

Only a brief explanation of the apparatus that converts the energy of moving electrons to a photographic image of the patient will be given. The X-ray apparatus can generally be divided into two parts: the X-ray tube and the X-ray generator. Within the X-ray tube the electrons are generated by heating a filament at the cathode end. The filament is a small piece of coiled wire from which electrons are "boiled off." The generated electrons are then attracted by great force to the opposite or anode end of the tube. The electrons are given energy as they are attracted to the positive tungsten target at the anode end of the tube. As the energetic electrons disseminate their energy in the struck target, most of the energy is removed as heat. However, a small part, about one per cent, of the energy of the electrons interacts with the electron structure of the tungsten target, and a quanta of energy called "X-rays" are produced.

The X-ray generator is merely the combination of control circuits which produces

the moving electrons at the proper time, in the proper quantity, to obtain the desired X-ray quanta. The quantity of electron flow across the tube is commonly referred to as the "milliamperage" or "MA" of the generator. The MA of the generator is, in reality, a measure of the quantity of X-ray flux from the tube. The energy of the emitted X-ray photon is related to the potential across the X-ray tube and is commonly referred to as the "KV" or "kilovolt."

MA and KV are very common words in any X-ray department, for their combination produces variations in the degree of black and white seen on X-ray films. MA is related to the overall blackness in more or less a linear fashion; whereas, KV is related to blackness of "exposure" of the film in an exponential fashion. The percentage change in KV has a much greater degree of resulting blackness than an equal percentage change in MA.

The blackness of the blacks and the whiteness of the whites are referred to as the "contrast" of the film. In general, when only black blacks and white whites, with no gradation of gray between, are present on an X-ray film, the film is more authoritative in its definition and more pleasing to the eye. The film appears to be more easily read when this high contrast is present. Such a high contrast film is produced with a very low KV setting on the generator. Such a film has a very low information content, however, and should be obtained only to satisfy a specific purpose. Examples of the specific purposes for relatively low KV films are: Is a metallic foreign body present?—or—Is a rib fracture present in an osteoporotic rib cage? Another extreme in which high contrast X-ray examination is indicated is in the case of mammography. The lowest KV's used in X-ray examinations today are used in mammography. Another distinct disadvantage of high contrast films is the difficulty they present when trying to separate the basic different absorbers of the X-ray beam. It is this differential absorption of the X-ray beam that results in the so-called "basic densities" seen on all X-ray films. In all X-ray examinations only five different grades of gray are seen, regardless of the part being examined, its position, or the disease process being investigated. The different grades of gray are: 1) Gas—the most black—all types produce the same degree of blackness on the X-ray films. 2) Fat—this is not as black as the gas blackness, but it is a dark gray. 3) Fluids, muscle, and organs—all produce a light gray which is the same. That is, a pulmonary artery cannot be differentiated from a pulmonary vein by the density or the deepness of its grayness. 4) Bone or calcium—this is white arranged in such an organized fashion as to have a cortex and a medullary cavity. Otherwise, the same degree of whiteness represents cartilage or soft tissue calcifications. 5) Heavy metal—this is either barium given to a patient orally or iodinated media which is usually given intravascularly. Other metals give the same whiteness. The lead marker which is placed on the examination to denote right or left is of the same degree of whiteness.

The modern X-ray generator has numerous auxiliary circuits; however, only two important auxiliary circuits will be mentioned here.

The first is that of the photo-timer. The photo-timer is usually a photo multiplier tube which is coupled to an X-ray fluorescent screen. This small "pickup" screen is spatially positioned so that the X-ray flux which causes the fluorescent screen to illuminate has already passed through the area to be imaged on the radiograph. The operator of the X-ray machine turns on the generator and causes X-rays to start passing through the part of the patient to be seen on the radiograph. When a preset amount of X-ray flux has passed through the part of interest and placed a latent image on the radiograph with the desired preset photographic effect, then the photo-multiplier tube causes the machine to be turned off. When using a photo-timer, the operator need only set the machine for the proper photographic effect, position the patient correctly, and turn

the machine on. The machine turns itself off when the correct degree of exposure of the film has occurred. The other auxiliary circuit that is of some interest is that of the image intensifier. The image intensifier is a device that accepts the photon image after it has been created by differential absorption within the patient and changes this image to an electronic image within a vacuum tube. The electronic image is focussed and increased in energy within the vacuum tube. The electron image is then changed to a minified luminescent image. The brightness or illuminance gain in this process is approximately 6,000. The image is 6,000 times brighter than would have been seen on the old fluoroscopic screen. Hence, much superior visual resolution is obtained using only one-third to one-half the X-ray flux to the patient.

No review of X-ray service would be possible without at least a comment on radiation safety. It should be remembered that the X-ray machine is a potentially lethal machine. It has the ability to damage or kill just as a gun or an automobile. It should be directed by a skilled operator. An operator with skill is necessary for this complicated machine to properly perform its function. An operator with limited skill can make it perform less than properly.

In this state the Department of Public Health has a radiation health division which is ready at all times to assist any physician with any problem concerning radiation safety.

All X-ray machines in this state are inspected by the Department of Public Health. It is the policy of the radiation health section of this state to require no improvements in acceptable machines that will not also improve the performance of the machine. At the present state of the art, all known safety improvements also improve the quality of the examination.

VD Problem Now Alarming

The American Medical Association Council on Environmental and Public Health urges the nation's medical societies to acquaint their membership with the growing and alarming dimensions of the VD problem. Physicians should take all appropriate measures to reverse the rise in venereal disease and bring it under control.

Physicians in private practice treat approximately 80 percent of the syphilis and gonorrhea that comes to diagnosis but report to public health departments only one out of every eight cases of syphilis and one out of every nine cases of gonorrhea they treat. Physicians should assist public health departments by reporting the VD cases they treat. Medical societies are urged to cooperate and give broad support to public health authorities.

The Council also urges medical societies to continue efforts for the enactment of state laws to permit physicians legally to treat VD cases of minors without obtaining parental consent; twenty-nine states and the District of Columbia now have laws which permit physicians to treat a minor for VD without adult consent.

The American Medical Association is making VD a national theme for Community Health Week—1971, with suggested dates of October 17-23.

Biologic Factors In Ethology

Wallace Marshall, M. D.*
Montgomery, Alabama

In this communication, the semantime will be the sensitivity of the individual's nervous system which is stimulated by the ecosystem in which he lives. Sensitivity is the ability or the capacity of an organism to be stimulated or its capacity of responding to stimulation acutely. Hence, the property of sensitivity appears as an important attribute of stimulation. Similarly, a stimulus consists of any agent, act or influence which produces a functional or a trophic reaction in a receptor or within an irritable tissue or organ[1]. Odum defines an ecosystem[2] as a viable community with its non-living environment which function together as an ecological system. The biosphere is that portion of the biologically inhabited air, soil and water in which ecosystems operate. An ecosystem can be that portion of the total environment which confronts man and his community of living and non-living matter. An ecosystem is but a small part of the environment where smaller ecosystems integrate and function within larger units.

These are controlled by homeostatic forces of nature which operate as checks and balances against undue oscillations within the environment. Also, there are individual and ecosystemic types of homeostasis which constantly tend to stabilize one's environment.

Some Ecosystemal Influences

The ecosystem to which an organism or individual comes in contact will greatly influence its behavior. Energy from one's ecosystem stimulates and probably sensitizes the individual's neural tube or brain, as the case may be, via its afferent connections. Thus, living in either an amicable or a hostile environment fashions the individual's behavior and way of life. This is exemplified especially by a hostile environment using Darwin's concept of the organism's fight (aggression) or run (regression) types of behavior, which are heavily dependent upon frustratory mechanisms. These reactions have been discussed at length in the author's first paper in this series of articles[3] on the immunologic approach to behavior. Kendall uses related mechanisms in his discussion of aggression and depression by which the latter term is closely related with regression[4], withdrawal, and rarely self-destruction. Defensive mechanisms are the *sine qua non* for survival in the individual's ecosystem or ecosphere.

Ecospheral energy may either stimulate or injure the individual. In other words, the dosage and length of time environmental stimuli play upon the individual will determine the beneficial or deleterious effects[5].

Another influence involves homeostasis which tends to limit the size of population in an ecosystem in which a particular individual lives[2], according to Liebig's Law. It stresses the *minimum* quantity of any essential material needed and available for the survival and the growth of each viable organism or individual.

For animals, light, water, and temperature are important for survival on land, as is oxygen, carbon dioxide, the tracer elements, etc. Toward the end of his illustrious career, Sigmund Freud realized the importance of sunlight as a major sustainer for life, to the consternation of some of his psychoanalytic colleagues. However, the ecologist has long recognized sunlight as being the ultimate source of energy for life's sustenance on this planet. Ecologists speak of the photo period (length of the day) which directly influences the behavior of living organisms by means of what is known as the biological clock. This

*From the Department of Psychology, Auburn University at Montgomery.

form of stimulus acts on the hypothalamus (by way of the individual's optic tract) and produces a hormone which, in turn, stimulates the pituitary gland. This reaction produces, in sequence, several other hormones which act on various target organs. These series of reactions act similar to a biologic clock which is controlled by the length of the day (period of light). Fire can be an ecologic factor. In certain areas, fire destroys mesquite shrubs and allows grass to grow which deer can ingest.

Soil (erosion) and air pollution (smog) are important ecologic factors as are the effects from the explosions from thermonuclear devices, especially strontium 90. There is archeologic evidence of pollution which affected various civilizations. As an example, the recent archeologic diggings in Rome, Italy (Eternal City) have demonstrated multiple strata of civilizations which appear to have been buried in their own rubbish and rubble. This must not happen to our civilization!

Ecologic Considerations in Ancient Medicine

Early physicians, exemplified by Aristotle (384-322 B. C.), employed some basic ecologic concepts such as the four primary qualities which were believed to form all matter. These were wet and dry and hot or cold which could be combined to produce the constitution of matter. The elements were fire, water, air and earth which led to the well known Hippocratic doctrine of the four humours. An excess or a paucity of any of these was believed to produce disease.

These ancient physicians were not too far askew with their medical theories in light of our current ecologic concepts which also involve the consideration of light, climate, temperature and the other corporeal aspects of one's environment mentioned heretofore.

Ecologic Relationships to Psychology and Psychiatry

Obviously, no animal or human can perceive environmental change without an intact nervous system which allows the individual to perceive such effects. The seeing eye dog is employed by the blind for this very reason as is the use of the Braille system for reading. However, nature has provided certain substitute compensatory measures whenever an afferent system becomes involved. As an example, the deaf person learns to lip read. The patient who loses a diseased kidney through surgery finds the remaining organ enlarge to take over the functions of the removed kidney as a compensatory measure towards the state of homeostasis. The organism or the individual, who, for any reason, is unable to perceive the constant changes which take place in one's ecosystem is in constant danger of becoming eliminated from the population. Examples of such behavior are only too ample as can be observed with the country's high death rates on the highways. The excessive use of alcohol dulls the perception in those drivers who fail to heed a curve in the road, or who drive on the wrong side of the highway, or who are unable to perceive an oncoming train at a railroad crossing. These car wreck victims' afferent systems had been dulled to the extent that they were not perceiving those many rapid environmental changes which occurred constantly while driving their cars at legal or illegal rates of speed.

Furthermore, one's inability to respond rapidly to such environmental changes while driving can lead to severe injury or death. In other words, one's reflexes are highly important for survival to cope satisfactorily with those many environmental rapid changes which are associated with driving a car. So we can realize the necessity of the individual being aware of environmental changes which occur constantly during one's life span. This can end abruptly if the individual fails to react properly to such continual environmental changes.

How does perception produce learning?

Most of our readers have felt pain from the blow of a hammer when we failed to re-

move our thumbs in time. This is learning from experience, which is perhaps the most facile learning method, but it is also highly painful. The ability to remember such painful episodes tends to protect us from such unhappy recurrences.

Many psychologists will agree that a conditioned response, as exemplified by the preceding event, contains elements of learning and remembering. If this were not so, then painful episodes would be oft repeated and not avoided. For these reasons, we tend to avoid further painful experiences. The afferent stimulus which is produced by a thumb being struck by a hammer produces the reflex or the response of rapidly withdrawing one's struck thumb. But the perception of pain, which becomes associated with such an experience, appears to sensitize the individual's central organs for perception so that future similar encounters may be avoided.

We now have introduced two separate bodily reactions to the painful thumb incident. These are the stimulus-response reaction of being struck on the thumb with its rapid withdrawal, plus the introduction of the all-important sensitivity factor which is responsible for teaching the injured individual and making him remember that striking his thumb will produce pain. So the subject of sensitivity assumes a highly important role for the processes of learning and remembering. It must be emphasized that learning and remembering are not totally dependent upon painful stimuli episodes. Other modalities, such as attention, motivation, and concentration (blocking out other interruptive afferent stimuli) also play dominant roles in the learning process, as appears to be the case with the induction of hypnosis.

During the 1830's Muller postulated his "law of specific energies." He showed that each afferent (sense) nerve produces the sensation only associated with that particular nerve, no matter as to how it became stimulated. He demonstrated also that the identical stimulus produces a sensation which conforms with that organ so stimulated. In other words, he showed that sensation is a specific property. Hence, awareness of the environment in the human becomes known only by the different manners these stimuli act on the five afferent senses.

Some recent articles [6-9] have dealt with the processes of learning which included the role of afferent stimuli, the encoding in the cerebral cortex, memory and recall by means of immunologic principles. At the outset of this communication, the role of the sensitivity of stimuli was stressed. All of the above factors are involved with the process of cerebration (thinking).

The popular concept of "mind" permeates many modern discussions involving cerebration. For this reason, it was deemed necessary to discuss this concept in a recent article[10] which attempted to demonstrate that human behavior can function rationally without the psyche-soma appellation which appears as a rather confusing subject while considering human cerebration (thinking).

Moraczewski[11] states that animals can distinguish themselves from their environment and possess the power of discrimination. They ingest food from their environment and use one or more sensory modalities to obtain and to store such information as cerebral engrams. The memory trace is employed by becoming a part of the whole behavior pattern of the individual. Moraczewski calls this form of behavior "cognitive-unity."

This is all well and good so far as it goes. But how can mere stimulus-response or conditioned responses lead to the intake (engramming), the storage, and the recall of information, which is cerebration? What biologic mechanisms can explain such behavior, whether it be normal or abnormal?

Ecosystemal and Immunologic Implications

Periodic searches of medical and biologic literature have not produced any feasible biologic *modus operandi* to explain such behavior. Certainly, well known Freudian, behavioristic, and other approaches, both past

and present, have not offered rational physiologic explanations for normal and abnormal behavior. This paucity in our behavioral knowledge has led to many philosophic explanations which do not lend themselves to adequate scientific inquiry through biologic research. It is no wonder that the psychesoma approach arose as a means for explaining the various behavioral processes in animals and humans.

Deprived and depraved ecosystems can produce noxious and pain producing stimuli which adversely affect many individuals who are forced to reside in such slum areas. Attkissen[12], Kelly[13], Klein[14], and Barker[15] have written about such ecologic matters and the influences these exert upon community psychology and those individuals who come in contact with such adverse stimuli (psychoimmunogens).

Afferent stimuli, arising from one's environment, arrive in the receptor cells of the cerebral cortex where neuroelectrophysiologic changes encode these cells. This environmental information is stored in one's cerebral archives (library theory). This constitutes the learning process. Related incoming (afferent) stimuli are recognized by these previously altered cerebral cells. This phenomenon is recall, which was mentioned by Plato and subsequent investigators such as James Priestley, the discoverer of oxygen. Freud popularized this identical concept under the phrase, "the association of ideas." Obviously, if immunologic expertise can isolate and then identify these infinitesmal substances (antibodies?) which probably become nascent from these afferent reactions in cerebral cells, then the immunologic theory will become a biologic law.

The Hullian view of overlearning may be explained by excessive similar psychoimmunogens which bombard the recipient cortical cells with such stimuli which sensitize and build up cellular potentials which tend to overflow, as it were, to the subthalamic and the limbic brain areas where the emotions and affect become nascent. The author's explanation for such behavior is the use of the supercharged Leyden Jar principle which discharges these potentials via the Papez-MacLean circuitry to the subthalamic and limbic regions of the brain.

This learning process can become excessively sensitized by the buildup of cortical potentials which result from the neuroelectrochemical changes which are produced by excessive afferent (environmental) stimuli which we have termed psychoimmunogens. This may well serve as the basis for abnormal behavior. As an example, *non-painful* excessive psychoimmunogens, which affect the cortical encoding centers, may produce manias, while excessive *painful* psychoimmunogens may produce phobias which are produced by excessive hypersensitizations in the brain's encoding areas. Associated with the latter reactions (phobias) are the frustratory forms of behavior which have been spawned by painful types of psychoimmunogens. Most individuals tend to avoid such painful environmental stimuli. If unavoidable, the Darwinian types of ensuing behavior take place. Two forms of such reactions ensue, namely fight (aggression) or run (regression) from the effects of such noxious psychoimmunogens. The latter form of behavior is intimately associated with the individual's withdrawal from his painful environment. But if such behavior is carried to the extreme, then depression may ensue or even suicide may occur which can be considered as the ultimate frustrator for life itself.

To put the topics of environment and heredity in proper prospectus, let us assume that we have an intricate pipe organ composed of a four manual keyboard and thousands of pipes. This has been inherited from our forefathers who built it well. This is the instrument we play throughout life, and it represents ourselves. But this mammoth, intricate and exquisitely sensitive instrument responds to the hands of one's environment. The music which ensues from this complex organ can be tender, sweet, or it might

be made to play violent and threatening tones. Its response is dependent upon the manner by which the ecosystem handles or stimulates it. So we are sensitive instruments which reflect the ways our environments act upon our own biological systems to make us what we are.

The silent organ loudest chants
The Master's requiem.

—Emerson

References

1. Dorland's Illustrated Medical Dictionary, W. B. Saunders Co., Phila., 24th Ed., 1965, pp. 1364 and 1442.

2. Odum, E. P.: Ecology. Holt, Rinehart and Winston, N. Y., 1963, p. 4.

3. Marshall, W: Learning and the development of frustrations. Jour. Med. Ass'n. of Ala. 38:622-625 (Jan.), 1969.

4. Kendall, R. E.: Relationship between aggression and depression. Arch. Gen. Psychiat. 22:308-317 (Apr.) 1970.

5. Marshall, W.: The psychology of being hurt. Jour. Louisiana St. Med. Soc. 122:180-184 (June), 1970.

6. Marshall: Theory, learning and the origin of complexes. J. Med. Assoc. Ala. 38:916-921, 1969.

7. Marshall: Normal and abnormal behavior from learning. J. Med. Assoc. Ala. 39:40-45, 1969.

8. Marshall: Immunologic augmentations for learning and psychiatry. J. Med. Assoc. Ala. 39:243-249, 1969.

9. Marshall: Immunologic psychology and psychiatry. J. Med. Assoc. Ala. 39:649-657, 1970.

10. Marshall: Immunologic factors in psychosomatic disorders. September, 1970 issue of J. Med. Assoc. of Ala.

11. Moraczewski, A.: The divorce of psyche and soma. Psychosomatics. 11:151-155, (May-June), 1970.

12. Attkisson, C. C.: Suicide in San Francisco's skid row. Arch. Gen. Psychiat. 23:149-157 (Aug.), 1970.

13. Kelly, J. C.: Toward an ecological conception of preventive interventions. Contributions from Psychology to Communications in Mental Health. Behavioral Publications, N. Y., 1968, pp. 75-99.

14. Klein, D. C.: Community Dynamics and Mental Health. John Wiley and Sons, Inc., N. Y. 1968.

15. Barker, R. G.: Ecological Psychology. Stanford Univ. Press, California, 1968.

---

860 Cancer Programs

A coordinated cancer activities program anchored to a systematized cancer registry in every hospital is the announced 1971 goal of the American College of Surgeons' Commission on Cancer.

A brochure published by ACS lists 860 cancer programs surveyed and approved, some fully, some provisionally. The list is by states, each captioned effectively by an outline map of the state.

No. 1 in the roll call of states, of course, is Alabama with the following five programs fully approved: Carraway Methodist Hospital, University Hospital and Hillman Clinic, Veterans Administration Hospital, all Birmingham; Lloyd Noland Hospital, Fairfield; Veterans Administration Hospital, Tuskegee. There were no provisional approvals.

Alaska has two fully approved programs, both in Anchorage, and two provisionally approved, one in Anchorage, one in Mount Edgecumbe.

For surrounding states, Florida has 15 fully approved, two provisionally; Georgia has 11 fully approved, seven provisionally; Mississippi three fully approved, four provisionally; and Tennessee seven fully approved, two provisionally.

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

You Can't Blame a Girl...

(when her husband's at fault)

Flagyl® brand of metronidazole

Cures Trichomoniasis in Both Women and Men

About half of all husbands of infected women harbor *Trichomonas vaginalis.**

Few of these men have symptoms. Even so, all are capable of perpetuating the infection and rendering treatment of a woman alone futile.

Only a systemically active medication like Flagyl is capable of reaching the hidden reservoirs of infection in the genitourinary tracts of both men and women.

Only Flagyl has been able to achieve rates of cure consistently above 90 per cent and often up to 100 per cent in trichomonal infections in both men and women.

Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

Contraindications: Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

Dosage and Administration: *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

Dosage Forms: Oral tablets . . . 250 mg.
Vaginal inserts . . 500 mg.

*References available on request.

SEARLE P. O. Box 5110 Chicago, Illinois 60680 942

Research in the Service of Medicine

sterile solution (300 mg. per ml.)

Consider Lincocin®

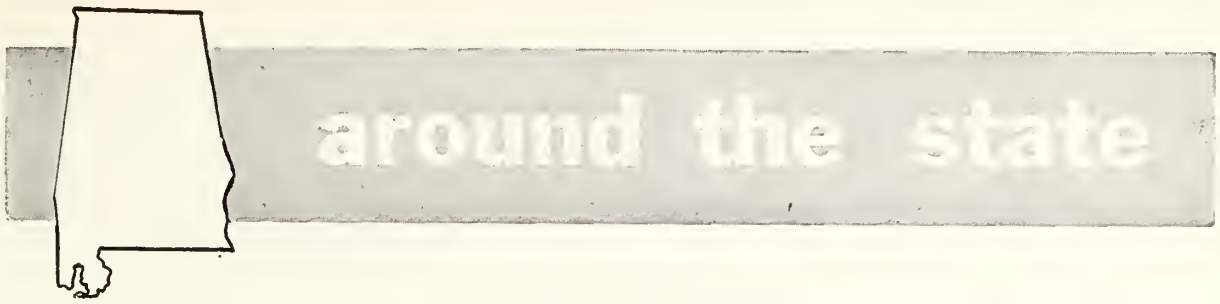
(lincomycin hydrochloride, Upjohn)

and single-dose 2 ml
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...

©1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49



Vital Statistics

NEW MEMBERS

Lee County

Schlichter, Frank John, Jr., b 35, mc Alabama 65, sb 66, P. O. Box 2425, Opelika, Alabama 36801.

MEMBERS DECEASED

Jefferson County

Phillips, Carey W., Jr., Birmingham, Alabama, Deceased 4/11/71.

Tallapoosa County

Hamner, Lewis H., Camp Hill, Alabama, Deceased 4/22/71.

CHANGES OF ADDRESS

Jefferson County

Fargason, Crayton C., Jr., present Birmingham to P. O. Box 2727, Birmingham, Alabama 35202.

Fisher, Charles J., present Birmingham to P. O. Box 2727, Birmingham, Alabama 35202.

Windsor, James L., present Bessemer to 705 Memorial Drive, Bessemer, Alabama 35020.

Madison County

Browning, Russell L., present Huntsville to 1203 Chatterson Road, Huntsville, Alabama 35802.

Elwell, Hildreth B., Jr., present Redstone Arsenal to NASA Medical Center, A&TS-MS-M, Marshall Space Flight Center, Alabama 35812.

Montgomery County

Adams, Robert B., present Montgomery to 2119 East South Boulevard, Montgomery, Alabama 36111.

Barnes, Zerney B., Jr., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Bostwick, Jackson L., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Campbell, Ewell F., Jr., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Cawthon, Kathleen S., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Cawthon, William U., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Draughon, Robert L., Jr., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Hughes, William D., present Montgomery to 1729 Croom Drive, Montgomery, Alabama 36106.

Jackson, Benjamin F., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Jackson, Benjamin F., Jr., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Jackson, James T., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Johnson, Claud, present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Leavel, Boude B., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Lightfoot, Philip M., Jr., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Lightfoot, Robert M., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Mann, Morris B., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Parks, James M., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Penton, George B., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Penton, John R., Jr., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Pickering, John M., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Poteet, James E., present Montgomery to 3980 Governor's Drive, Montgomery, Alabama 36111.

Prescott, Cecil H., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Shashy, Paul M., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Smith, Charles H., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Stough, Austin R., present Montgomery to 1130 Main Street, Cincinnati, Ohio 45210.

Walters, Conrad R., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Wickman, Kathleen, present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

NEW TELEPHONE NUMBERS

Barnes, Zerney B., Jr., Montgomery	262-7778
Bostwick, Jackson L., Montgomery	265-5003
Colley, Jesse H., Pike	566-3120
Lightfoot, Philip M., Jr., Montgomery	265-7021
Prescott, Cecil H., Montgomery	262-5752
Rudder, William H., Clarke	246-4487
Schlichter, Frank J., Jr., Lee	745-2254
Shashy, Paul M., Montgomery	262-4418
Smith, Charles H., Montgomery	262-5752
Walters, Conrad R., Montgomery	262-0314
Wright, Thomas W., Madison	539-9311

MEMBER REINSTATED

Clarke County

Rudder, William Harwell, b 22, mc Alabama 52, sb 53, 108 College Avenue, P. O. Box 455, Jackson, Alabama 36545. GP.

Continuing Recognition

More than 20,000 MDs have received the Physician's Recognition Award, established by the American Medical Association in 1969 to honor doctors' participation in continuing medical education.

"A lifetime of learning is lifestyle for physicians," notes James Z. Appel, M. D., member of AMA's Committee on Continuing Medical Education. "Continuing education is essential to the practice of medicine."

The Physician's Recognition Award credits the MD for his "lifestyle." It's given for a minimum of 150 credit hours earned over a continuous three-year qualifying period.

Fathers and Sons in Medicine

Mobile To Selma In Four Generations

The story of four generations in medicine that began in Mobile with the birth of Samuel Rutherford Olliphant in 1828 is a continuous narrative that extends through today into a distant tomorrow, with Selma as its current locale.

Any map embracing the travel history of these four generations may be football-shaped and large enough to include New York to the North, Cuba to the South, Louisiana and Mississippi to the West, and South Carolina to the East.

All five doctors in the four generations obtained their M. D. degrees from Tulane University, as it is presently known, though the diplomas of the first three show that it

UNTO THE 3rd & 4th GENERATIONS.—The faded picture of the Drs. Samuel Olliphant, Jr. and Sr., was taken by the other son, Dr. Howard S. Olliphant, in New Orleans in 1883. The individual photographs are of Drs. Samuel Olliphant Moseley, Sr. and Jr., of Selma. Scrawled on a prescription blank of a century ago are biblical quotations on "honoring father and Mother" (note the "M" in Mother is capitalized), characteristic of the deeply religious Dr. Olliphant, Sr.

Dr. SAM R. OLLIPHANT,

OFFICE

No. 258 St. Francis Street, Between Jackson and Joachim.

Residence—No. 764 Palmetto St., bet. Marine and Charles.

OFFICE HOURS

9½ to 10½ A. M., and 3½ to 4½ P. M., and 7 to 8 at night.

℞

on honoring fathers
& Mother
Luke 18 & 20
Matth 15 & 4
Exodus 20
Matth 19 & 19
Mark 7 & 10

(Continued on Page 813)

when manhood ebbs... or is delayed due to testicular hormonal insufficiency

What nature denies, Halotestin may replace. That's the purpose of this orally active androgen in conditions such as impotency, eunuchoidism, and eunuchism. The most widely used agent of its kind, Halotestin is replacement therapy with approximately five times the potency of oral methyltestosterone. And, at its recommended daily dosage of 2 to 10 mg., Halotestin is economical as well as convenient. Of course, you will want to employ androgens carefully in young boys to avoid premature epiphyseal closure... and in the elderly where possible sodium retention may, minimally, precipitate edema. Tablets of 2, 5, and 10 mg.

Halotestin® 5 mg. tablets

(fluoxymesterone Upjohn)

oral replacement with parenteral-like potency

Please see facing column for summary of contraindications, precautions, and adverse reactions.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

Halotestin®
(fluoxymesterone, Upjohn)

Orally active androgen about 5 times as potent in anabolic and androgenic activity as methyltestosterone. Halotestin (fluoxymesterone) induces significant retention of calcium and potassium, but retention of sodium not marked. Doses below 20 mg. daily have little effect in producing creatinuria.

Indications *Male:* Replacement therapy in testicular hormone deficiency states. Prevents atrophy of the accessory male sex organs following castration for as long as therapy is continued. Impotence and male climacteric symptoms when due to androgen deficiency. Primary eunuchoidism and eunuchism. Delayed puberty when established as not a simple familial trait. Indicated for those symptoms of panhypopituitarism related to hypogonadism, however, appropriate adrenal cortical and thyroid hormone replacement therapy remain of primary importance. *Female:* Palliation of androgen-responsive, advanced, inoperable breast cancer in women between 1 and 5 years postmenopausal or women in whom castration has shown the tumor to be hormone dependent. Prevention of postpartum breast manifestations of pain and engorgement; there is no satisfactory evidence that this drug prevents or suppresses lactation per se. In osteoporosis androgens may be of adjunctive value to adequate considerations of diet, calcium balance, physiotherapy and general health promoting measures. *Males and Females:* In the treatment of protein depletion states which occur in geriatric patients, in debilitation states, in chronic corticoid therapy, resistant fractures; cryptorchidism; creating a positive nitrogen balance, tissue repair and other anabolic effects. Androgenic steroids may produce a response in aplastic anemias, myelofibrosis, myelosclerosis, agnogenic myeloid metaplasia and hypoplastic anemias due to malignancy or myelotoxic drugs. Androgens are not of value in other anemias.

Contraindications Pregnancy (may virilize female fetus), mammary carcinoma in the male, prostatic carcinoma, severe liver disease, severe cardiorenal disease and severe persistent hypercalcemia.

Precautions Employ with caution in young boys to avoid precocious sexual development and premature epiphyseal closure. Androgens tend to promote retention of sodium and water, therefore, watch for edema—particularly in the elderly. Incidence and severity of edema have been minimal and have been associated only with high doses used for palliation of breast cancer. Hypercalcemia may occur, particularly in patients with metastatic breast carcinoma; if this occurs the drug should be discontinued. Changes in liver function tests, such as increased BSP retention and SGOT levels, can occur during therapy. Jaundice has been rarely reported. If liver function tests are altered, discontinue medication or reduce dose. Priapism is indicative of excessive dosage and is indication for temporary withdrawal of drug. When treating protein depletion states or osteoporosis, an adequate diet should be provided and prolonged immobilization avoided whenever possible. When treating aplastic or hypoplastic anemias, androgen therapy should not replace other measure such as transfusion, correction of iron deficiency, antibacterial therapy, and the use of corticosteroids.

Adverse reactions Nausea, dyspepsia, menstrual irregularities, hepatic dysfunction, priapism, edema, precocious sexual development, and premature epiphyseal closure in young patients have been reported. *Male*—Prolonged administration or excessive dose may cause inhibition of testicular function with oligospermia and decreased ejaculation volume. *Female*—Large doses or prolonged administration may produce masculinization with signs such as hirsutism, deepening of the voice, enlargement of the clitoris, acne, and sometimes, increased libido.

Supplied *Tablets: 2 mg.*, scored—bottles of 100./*5 mg.*, scored—bottles of 50./*10 mg.*, scored—bottles of 50.

For additional product information, see your Upjohn representative or consult the package circular.

upjohn The Upjohn Company, Kalamazoo, Michigan

9-7627-R MED 8-5-5 (LQX)

(Continued from Page 811)

was in those days "the University of Louisiana."

The senior Dr. Olliphant returned with his medical degree to his native Mobile to practice for the rest of his life—or until 1899. From his printed prescription blanks that survive to this day, his office address is shown as No. 106 St. Francis Street, "bet. Jackson and Joachim." His residence was "North Side Palmetto Street, bet. Marine and Charles." And his office hours are set forth as "9½ to 10½ a. m., 3½ to 4½ p. m., 8 to 9 p. m."

Both of Dr. Olliphant's sons followed him into medicine, but neither in Mobile. Originally, both remained in New Orleans to practice, Dr. Howard S. Olliphant staying until his death at the age of 50. Dr. Samuel Rutherford Olliphant, Jr., served as president of the Louisiana State Board of Health, 1891-97. Moving to New York in 1906, he is:

". . . remembered for inventing an improvement in sulphur fumigation which became known as the Olliphant Furnace . . . He gave to the State of Louisiana and to all other public quarantine establishments the free benefit of this invention. A model of it was shown at the Chicago World's Fair. Afterwards it was donated to the Naval Museum in Washington, D. C."

The junior Dr. Samuel Olliphant, returning South on a visit in 1921, died in Lafayette, La.

But it remained for the sister of these two younger doctors to carry on the tradition of medicine unto the third and fourth generation. Etna Olliphant was married to a young Baptist minister from South Carolina named Hartwell Robert Moseley. They went as missionaries, first to Mexico, then to Cuba. And when their son, Samuel Olliphant Moseley, born in Rock Hill, S. C., in 1895, came to the States for his higher education, it was inevitable that his nickname should be "Cuba," first at the University of Mis-

sissippi where he obtained his baccalaureate degree, and then at Tulane, where he earned his M. D. He came to Selma in 1921 to remain in practice for the 40 years of life left to him. One of his earliest recollections, he once said, was as a 4-year-old, watching the defeated Spanish fleet limping out of Santiago Harbor, headed home. He was married to the former Wildie Bene of Mississippi.

Although Dr. Moseley's father was no medical missionary, when ill health forced him to return to the States, he became active in building hospitals for his denomination, and a plaque at Selma Baptist memorializes the fact. Following his death, his widow resumed her work as a Baptist missionary to the island nation south of us, remaining until her retirement at the age of 73. She returned to Selma to make her home with her son until her death 26 years later, surviving her son by six years.

In the issue of *The Alabama M. D.* published last Jan. 21st appeared a picture of Samuel Olliphant Moseley, Jr., M. D., and the announcement that he had been named Selma's Citizen of the Year at the 118th annual meeting of the Selma Chamber of Commerce. The account went on to say:

"A Past-President of the Dallas County Medical Society, Dr. Moseley is currently president of the Baptist Hospital and is a Trustee of Judson College. He was cited for his efforts as Chairman of the Selma City Board in the re-organization of the school system in compliance with the Supreme Court orders last fall. Dr. Moseley, a native of Selma, received his M. D. degree from Tulane University School of Medicine in 1946 and returned to Alabama in 1953."

Like father, like son, the younger Dr. Moseley succeeded his sire as the "football doctor" for Selma's high school teams, in addition to his absorption in hunting and fishing. His dad, once a pitcher for the University of Mississippi, years ago quipped: "If the Atlanta baseball club had offered me $25 more a month, I'd have been in professional baseball instead of surgery."

The current Dr. Moseley's first wife, Christine Paris of New Orleans, died in 1957, and he is today married to the former Dorothy Johnson of Greensboro. There are five children.

(Editor's note: It's a small world. The author of the foregoing, son of a Baptist minister, was living in Oxford, Miss., in 1917 when the senior Dr. Moseley was a pre-med student at the University. As Cuba was too far away to go for Christmas that year, the future Selma physician spent that holiday in our home. My father was pastor of the First Baptist Church of Oxford.—WJMJr).

A happy husband is one who plays poker regularly with his friends—and goes straight home after the game.

Not just a motel
it's a Guest House

. . . with 171 handsome rooms designed for your comfort and convenience. A center-of-everything location including Birmingham's University of Alabama Medical Center . . . making The Guest House a favorite of Doctor's wives and in-town outpatients. Superb dining, dancing and nightly entertainment. Come stay with us often.

THE RESTAURANT
THE PLAYROOM • CYPRESS ROOM
CONVENTION FACILITIES

The Guest House
MOTOR INN

PHONE 324-8653
18TH ST. &
10TH AVE., SOUTH
BIRMINGHAM, ALABAMA

"Where the Action Is!"

Commercially Sponsored Awards Jettisoned

Commercially-sponsored awards were eliminated from MASA's annual session by unanimous vote of the Committee on Public Relations at its May meeting. Specifically the Samuel Buford Word Award, created last year to honor the memory of the late President of the Medical Association, will be substituted for the A. H. Robins Award in the future.

It was voted also to reduce the appropriations for the William Henry Sanders and the Douglas L. Cannon Awards from $100 to $50.

Further, the establishment of a MASA Speakers Bureau will be the responsibility of the four division vice presidents.

Committee involvement in both water and air pollution problems was voted on upon the recommendation of the chairman. A five-year plan was recommended to educate the public, probably through the schools. An immunization program was voted into the resolution.

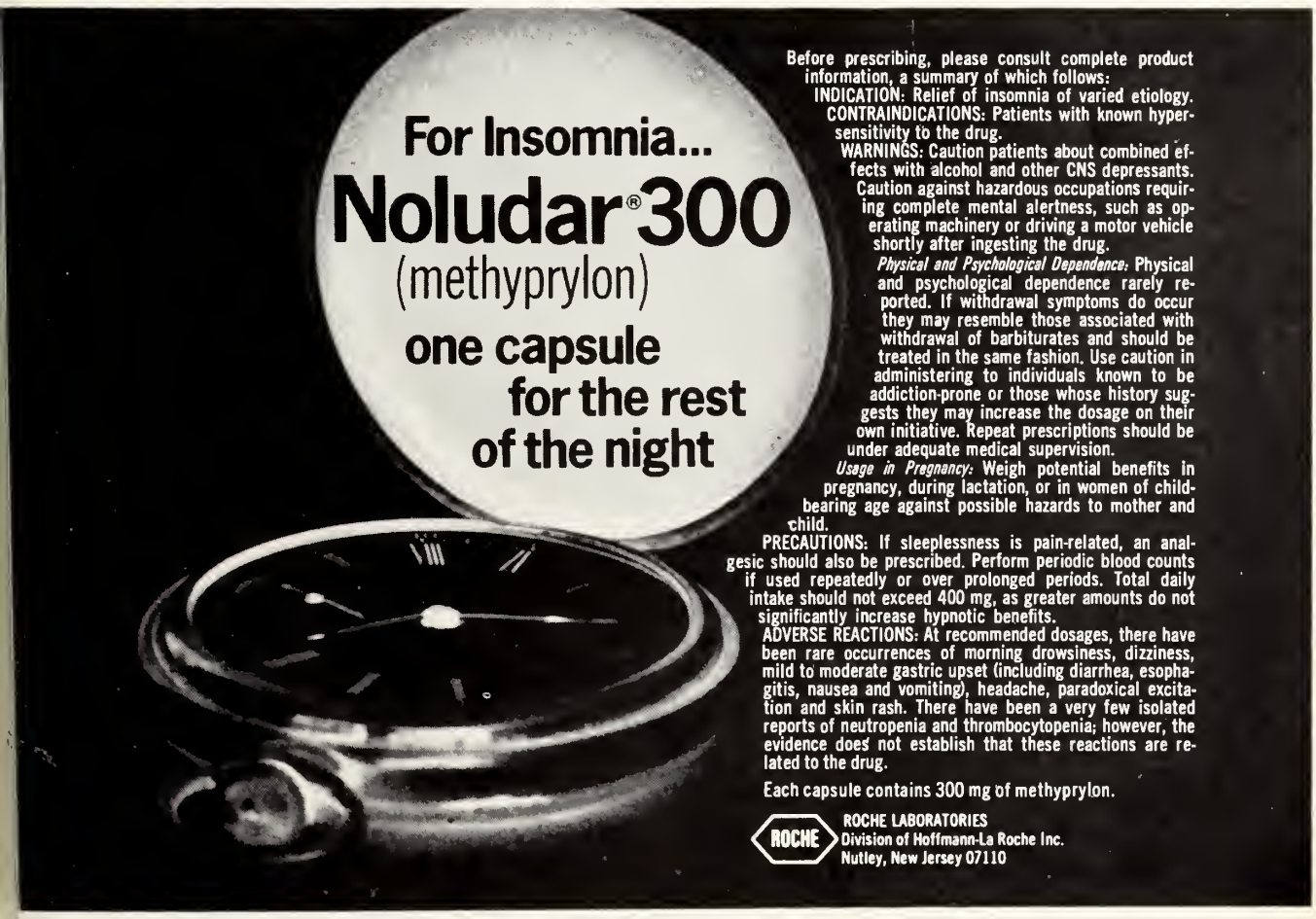
Dr. E. W. Stevenson is chairman of the Committee on Public Relations, which under a proposed constitutional amendment would become known as the Committee on Community Relations. Others on the committee are Drs. H. M. Pewitt, L. D. McLaughlin, Jolly McKenzie, H. J. Till, and J. A. Weaver.

Wisdom is the wealth of the wise.

—W. G. Benham

Learning is like rowing upstream; not to advance is to drop back.

—Culinary Almanac



Alabama Department of Public Health

Alabama's Babies

By Harold H. Klingler, M. D.
Director, Bureau of Maternal and Child Health
Alabama Department of Public Health

Compulsory national health proponents continue to state to the general public claims that the United States ranks considerably higher in infant mortality than many other countries. It has also been stated that the way to improve this situation is to nationalize the health care system of this country. A common topic elaborated upon by this group is infant mortality. Statistics indicate that the United States has a higher infant mortality rate than many other countries. It is rarely mentioned, however, that the methods of calculating infant mortality figures vary considerably in different countries. If all countries used the same calculation methods, the United States would improve its standing.

The infant mortality rates in the United States cannot be mentioned with pride. Alabama's infant mortality rates have consistently been higher than the national average. In 1950 the U. S. infant mortality rate was 29.2, and Alabama's was 36.4. Both national and Alabama rates have consistently decreased over the 20-year span. However, Alabama's rate of decrease has been more rapid than the nation's. The decrease in infant mortality over the past 20 years nationally has been 31.5 per cent; Alabama's decrease has been 33.5 per cent. These figures, however, do not tell the entire story. During the past year, 1969 to 1970, Alabama's decrease percentage-wise almost doubled the national percentage decrease. Alabama's decrease was 8.3 per cent from 1969 to 1970, while the national decrease was 4.3 per cent. The present infant mortality rate for this state is 24.2; for the United States it is 19.8.* When statistics are broken down by race, it is found that this state compares favorably with national figures.

In spite of the best care from a medical standpoint, mortality is higher when babies are not born well and do not develop normally. This involves social conditions over which physicians have little control. It may be noted that a practical, sound, and constructive step to the solution of this problem was offered recently by Dr. Walter C. Bornemeier, president of the American Medical Association, when he said:

**"Federal agencies that are responsible for funds in the maternal and child area should make funds available for the estab-

---

*American Medical News, 3-29-71

**Dr. Bornemeier's address to Alabama Medical Association, Birmingham, 4-15-71. Statistics provided by Ralph W. Roberts, Director, Bureau of Vital Statistics, Alabama Department of Public Health

(Continued on Page 820)

"Around the World in 80 Days"...

. . .An expense-paid trip with one hitch -- a 60-day hitch in a South Viet Nam civilian hospital delivering vitally needed medical care to the people of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

Program Director
Volunteer Physicians for Viet Nam
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

in stable adult diabetes, if diet alone fails...

start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

A Distinctive Oral Hypoglycemic

a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

DBI®-TD
(phenformin HCl)
timed-disintegration capsules 50 mg.

lowers elevated blood sugar

How to prescribe DBI®-TD (phenformin HCl)

To start with DBI-TD

Week 1 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal.

Week 2 Continue effective DBI-TD dosage.

If necessary, add an additional capsule to the A.M. or P.M. dose.

Thereafter Continue effective DBI-TD dosage.

To transfer from sulfonylurea therapy to DBI-TD alone: The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

To transfer from sulfonylurea therapy to combined therapy with DBI-TD: The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary. **Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes that is uncomplicated and well regulated on insulin; acute complications of diabetes (metabolic acidosis, coma, infection, gangrene); surgery; severe hepatic disease; renal disease with uremia; cardiovascular collapse, after disease states associated with hypoxemia. **Warning:** Use during pregnancy is to be avoided. Until adequate data on the effects of DBI on the human fetus are available, such use can be considered experimental. **Precautions: Starvation Ketosis,** which must be differentiated from "insulin lack" ketosis, and is characterized by ketonuria in spite of relatively normal blood and urine sugar, may result from excessive DBI therapy, excessive insulin reduction or insufficient carbohydrate intake. Adjustment of DBI-TD or insulin dosage, or supplying carbohydrates, alleviates this state. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING BLOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

(Continued from Page 816)

lishment of a maternity center in every appropriate population center in deprived areas. The facility should be staffed with: physicians; nurses to help with delivery of babies; outreach people to comb the neighborhood to contact the pregnant girls and women; and, in some cases, personnel to bring at least some prenatal care to the mother who has no one to baby-sit with her family.

"The center should be capable of holding classes in family planning. Sex education classes could be taught for teenagers and even ten-year-olds. The center should be able to deliver those patients who are likely to deliver normally. With today's early ambulation, mothers can be sent home early, and visiting nurses sent for follow-up.

"Nutrition must have attention. Additional food stamps must be provided where indicated. Greater welfare funds should be available when needed. Good prenatal attention and education in sanitation are priorities.

"All of these factors will increase the possibility of delivering a healthy baby at term instead of a premature or otherwise unhealthy child. Every child has the right to be born healthy, and if he is born healthy, the infant mortality rate will go down."

The availability of professional care is of the utmost importance, and until more physicians are available in this area, the problem will continue to exist. It is concluded that the nationalization of medicine, however, will never solve the health manpower shortage. It is gratifying that the Administration of the State of Alabama is presently taking steps to train increasing numbers of physicians. More physicians must be trained!

He has lived well and happily who has lived in the hearts of his friends.

—Christopher Bannister

Thank heaven for hippies. If everyone were energetic, honest and responsible, the competition would be unbearable.

When we were first married, my wife said I looked like a young Greek god. Now I remind her of an old Roman Coloseum sweeper.

Christmas is acomin' and the geese are getting fat. Please to put a twenty in the old man's hat.

The man who can tell you what a soft job you have usually has time to.

Save your Yankee money, boys. The tax will rise again.

Civilization is the sum total of all the little daily acts of kindness.

Middle age is a state of mind and a city of opportunity.

Con-
ven-
ience!

Dicarbosil®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

In 1852 Alabama physicians believed malaria was caused by the State's heat, moisture and "superabundant" vegetation. They called upon planters to establish drainage systems and clear wilderness areas.

BLUE CROSS-BLUE SHIELD OF ALABAMA

INDEX

THE JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Volume 40

July 1970—June 1971

Explanatory Notes

Arrangement of Index

I. Authors

II. Titles

III. Association Forum

IV. Alabama Department of Public Health

I. AUTHORS

E.

Edwards, W. Sterling, M. D., Albuquerque, New Mexico—The Jerome Cochran Lecture, Development of Arterial Grafts And Arterial Surgery In Alabama, 239

F.

Foy, R. E., M. D., Enterprise—Radiology—The Utilization of a Technology, 797

G.

Gravlee, L. Clark, Jr., M. D., Birmingham—The Treatment of Vaginitis with Quinettes—A Clinical Study, 172

H.

Holley, Howard L., Birmingham—Management of Rheumatoid Arthritis—A New Look, 567

Hosty, Thomas S. and Francis, Robert D., Montgomery—Laboratory Tests for Hepatitis, 379

L.

Lauderdale, Robert O., M. D., Birmingham—The Effects of Suntanning, 103

Lewis, Irwin, M. D., F. R. C. P. (c), Birmingham —L-Dopa In Parkinson's Disease, 709

M.

Marshall, Wallace, M. D., Montgomery, Immunologic Factors in Psychosomatic Disorders, 167

Marshall, Wallace, M. D., Montgomery—Biologic Factors in Ethology, 800

McAuley, Malcolm D., M. D., Birmingham—Histoplasmosis of the Tongue Presenting as Carcinoma, 29

S.

Smith, W. H. Y., M. D., Montgomery—Occupotional Health—As State Programs Face Up To It, 244

T.

Tysinger, D. S., Jr., M. D., Dothan—The Pulmonary Alveolus, How It Works and What Affects It, 33

Tysinger, D. S., Jr., M. D., Dothan—Pulmonary Function Testing For the General Hospital and Physician, Part VIII, 106

Tysinger, D. S., Jr., M. D., Dothan—On Coronary Occlusion and the Rationale of Treatment, 245

Tysinger, D. S., Jr., M. D., Dothan—Blood Gas, Fluid and Osmotic Monitoring in the Coronary-Pulmonary Care Unit, 321

(Continued on Page 825)

When Constipation is a Concern . . .

Consider

DOXIDAN® The Logical Laxative

(laxative with stool softener)

Doxidan relieves constipation:

- **gently**—minimal laxative side effects
- **predictably**—overnight results
- **conveniently**—one or two capsules at bedtime
- **economically**—costs less per effective daily dose*

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate. Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247) and Unit Dose 100's (10 x 10 strips).

*based on actual drug store survey of prescribed dosages

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-168

Thorazine®

brand of chlorpromazine

versatility
quality
experience

NOW THERE'S PRICE

Smith Kline & French Laboratories SK&F

(Continued from Page 822)

Tysinger, D. S., Jr., M. D., Dothan—Blood Gas, Fluid and Osmotic Monitoring in the Coronary-Pulmonary Care Unit, 381

Tysinger, D. S., Jr., M. D., Dothan—Common Misconceptions in Inhalation Therapy, 439

Tysinger, D. S., Jr., M. D., Dothan—Common Misconceptions in Inhalation Therapy, Part II, "Particulate Water", 503

Tysinger, D. S., Jr., M. D., Dothan—Common Misconceptions in Inhalation Therapy, Part III, Air Flow, Pressure and Turbulence, 569

Tysinger, D. S., Jr., M. D., Dothan—Common Misconceptions in Inhalation Therapy, Part IV, Respirators and Their Applications, 644

Tysinger, D. S., Jr., M. D., Dothan—Lessons Learned in Twenty Years Experience In Treating The Chronic Lung Patient At Home with Mechanical Equipment, 719

V.

Vickery, R. E., M. D., Andalusia—Case Report: Multiloculated Lymphangiomatous Cyst of the Ileum, 317

W.

Weinrib, Michael, M. D., Montgomery; Schaefer, John W., M. D., Denver, Col., and Oikawa, Yoichi, M. D., Cincinnati, Ohio—An Evaluation of Liver Function Tests in the Differential Diagnosis of Jaundice, 641

II. TITLES

B.

Biologic Factors in Ethology (Marshall), 800

Blood Gas, Fluid and Osmotic Monitoring in the Coronary-Pulmonary Care Unit (Tysinger), 321

Blood Gas, Fluid and Osmotic Monitoring in the Coronary-Pulmonary Care Unit (Tysinger), 381

C.

Case Report: Multiloculated Lymphangiomatous Cyst of the Ileum, (Vickery), 317

Common Misconceptions in Inhalation Therapy (Tysinger), 439

Common Misconceptions in Inhalation Therapy, Part II, "Particulate Water" (Tysinger), 503

Common Misconceptions in Inhalation Therapy, Part III, Air Flow, Pressure and Turbulence (Tysinger), 569

Common Misconceptions in Inhalation Therapy, Part IV, Respirators and Their Applications (Tysinger), 644

Coronary Occlusion and the Rationale of Treatment, On (Tysinger), 245

D.

Development of Arterial Grafts and Arterial Surgery in Alabama, The Jerome Cochran Lecture (Edwards), 239

E.

Effects of Suntanning (Lauderdale), 103

Evaluation of Liver Function Tests in the Differential Diagnosis of Jaundice (Weinrib, Schaefer, Oikawa), 641

H.

Histoplasmosis of the Tongue Presenting as Carcinoma (McAuley), 29

I.

Immunologic Factors in Psychosomatic Disorders (Marshall), 167

L.

Laboratory Tests for Hepatitis (Hosty and Francis), 379

L-Dopa In Parkinson's Disease (Lewis), 709

Lessons Learned In Twenty Years Experience in Treating the Chronic Lung Patient at Home with Mechanical Equipment (Tysinger), 719

M.

Management of Rheumatoid Arthritis—A New Look (Holley), 567

O.

Occupational Health—As State Programs Face Up To It (Smith), 244

P.

Pulmonary Alveolus, How it Works and What Affects It (Tysinger), 33

Pulmonary Function Testing for the General Hospital and Physician (Tysinger), 106

R.

Radiology—The Utilization of a Technology (Foy), 797

T.

The Treatment of Vaginitis with Quinettes—A Clinical Study (Gravlee), 172

III. ASSOCIATION FORUM

Continuing Graduate Education, 590

Economical Long-Distance Telephoned Electrocardiographs, 398

Emergencies, 253

Locality Rule, 329

Malpractice Survey, 47

Medical Information Service Via Telephone (MIST), 257

Physician-Patient Rapport A Vital Relationship, Malpractice-Medical Jurisprudence Conference Told, 181

Planned Parenthood 40 Years in Alabama, 451

IV. ALABAMA DEPARTMENT OF PUBLIC HEALTH

Administrative Assistants Relieve County Health Officer Shortage, 83

Air Pollution, 758

A Review of the Program for the Detection of Genetic Diseases in the Public Health Laboratory, 613

Hepatitis Test Still in Developmental State, 540

Hospital "Disposables" Also a Fire Hazard, 138

Syphilis—1957 to 1970, 479

Alabama's Babies, 816

Evidence of testicular atrophy in men taking massive doses of analgesic drugs is noted in Queen's University research reported in a recent issue of Medical Digest.

The nurse motioned to one of the expectant fathers and announced, "You have a son." Another man dropped his cigaret, jumped up and cried, "Say, what's the idea? I was here before he was."

in the Heart of
BIRMINGHAM

CLOSE TO UNIVERSITY MEDICAL CENTER

Ranch House
Birmingham's Friendly
Motel
PHONE 322-0691

Epigram

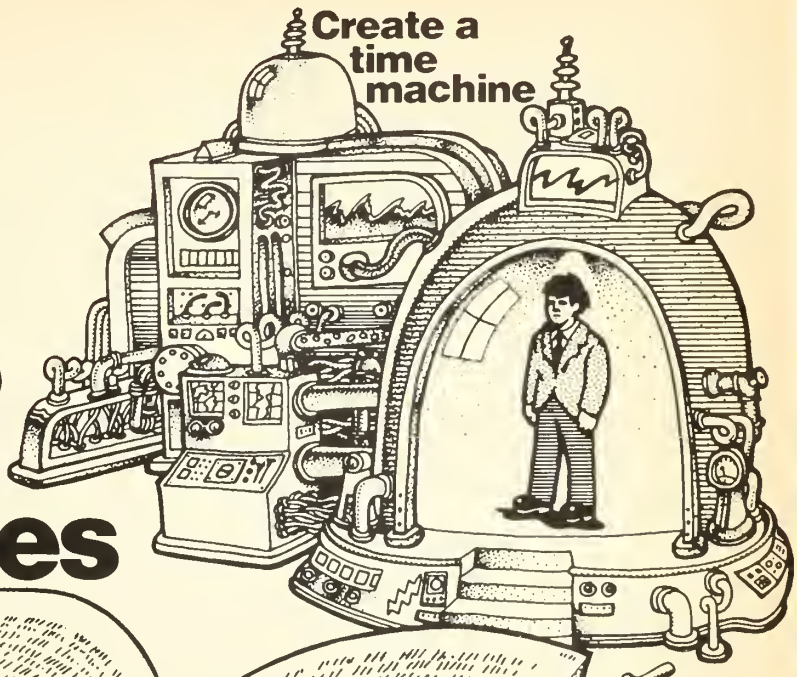
What fools indeed we mortals are
To lavish care upon a Car,
With ne'er a bit of time to see
About our own machinery.

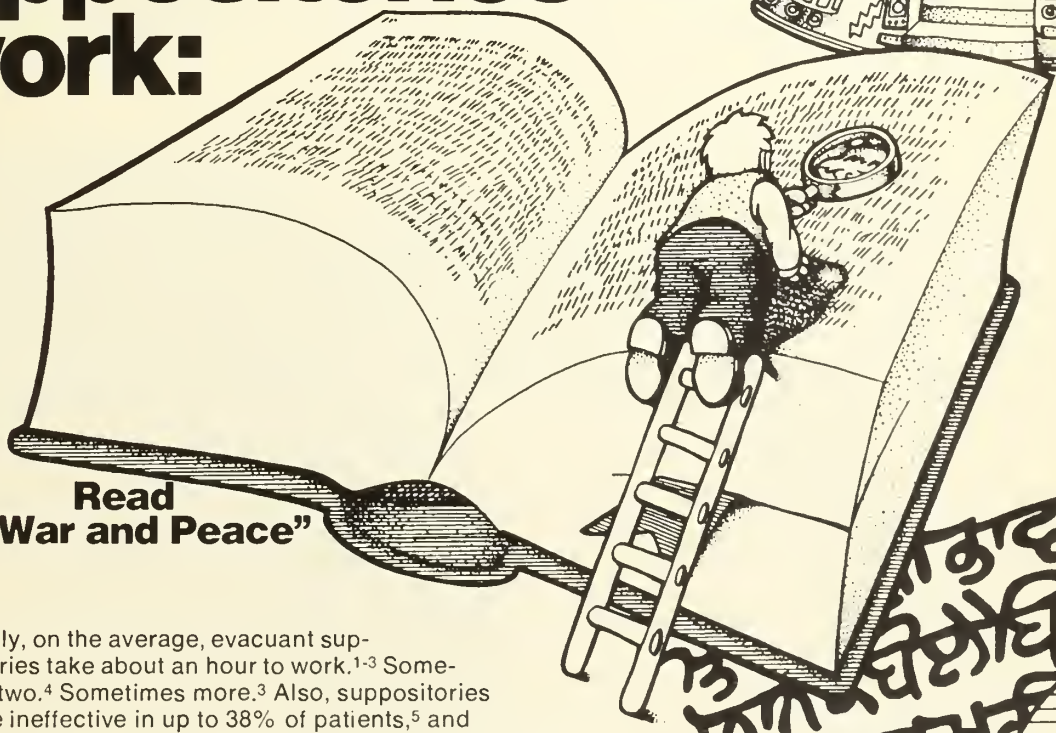
—John Kendrick Bangs

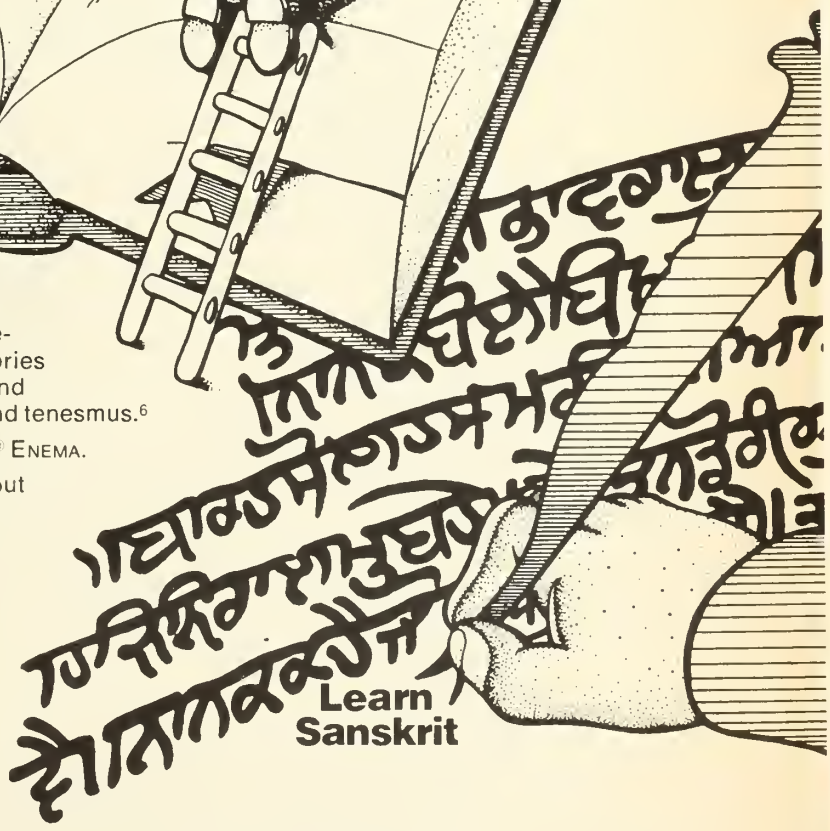
The Pennsylvania Medical Society Interspecialty Committee is in the process of investigating identifying the newborn by footprints. The investigation followed consideration of some evidence that the effectiveness of the required procedure is open to reasonable doubt.

—PMS Monitor

What to do until suppositories work:







Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

C. B. FLEET CO., INC.
Lynchburg, Va 24505

Fleet
pharmaceuticals

Warning: Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present.
Caution: Do not administer to children under two years of age unless directed by a physician.

References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964

Efudex®

(fluorouracil)
cream/solution

In the treatment of solar/actinic keratoses—
An alternative to cold, fire and steel

2/23/68
Before treatment with 5% 5-FU cream. Patient R. G., 78 years old, shows extensive skin changes due to weathering and severe solar/actinic keratoses.

3/26/68
Following one month of therapy. Intense erythematous reaction is seen at sites of keratoses. Normal skin has not reacted. Some areas which had reacted initially have undergone healing despite continued topical application of 5% 5-FU.

6/11/68
Ten weeks after discontinuance of therapy. All areas have healed completely. Residual mild erythema remains in some areas. This patient also had seborrheic keratoses which, as expected, have not reacted. There is no evidence of residual lesions or recurrences.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N J 07110

An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann - La Roche Inc., Nutley, New Jersey.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

new
Efudex®
(fluorouracil)
cream/solution

The Bradley Center --- for the problems of living

An all new homelike open psychiatric residence on a lovely five-acre tract, centrally located within the community, providing a comprehensive range of continuous services, including in-patient, day care, and outpatient treatment. Each patient participates in an extensive and intensive treatment program, based almost exclusively upon multiple psychotherapeutic encounters. These include individual psychotherapy, group psychotherapy, the nursing milieu, occupational therapy, recreational therapy, topical small group discussions, and other group activities in the Center, as well as in the community, depending on individual needs and interests. Medications are prescribed when appropriate.

Any individual may be admitted who, in the opinion of the medical staff, might benefit from the services provided in this particular setting. This can best be determined by a preadmission consultation with the person and a responsible family member.

Accredited by the Joint Commission on Accreditation of Hospitals.

Leonard T. Maholick, M. D.
Medical Director

Maj. Gen. (ret.) Howard Snyder
Administrator

THE BRADLEY CENTER, INC.
2000 Sixteenth Avenue
Columbus, Georgia 31901
Area Code 404 324-4882

This "case history" runs to some 10,000 pages

This is a typical "case history" of one new drug—or, rather, a proposed new drug—assembled for submission to the U.S. Federal Food and Drug Administration. These volumes are the result of several years' work by thousands of professional and skilled personnel in just one pharmaceutical company's research laboratories, and by hundreds of physicians in medical schools, hospitals, and private practice. They cover every aspect of experience with this proposed new agent from chemical laboratory to clinic, from mouse to man. Each volume could conceivably represent hundreds of thousands of dollars of financial investment, countless hours of human effort. This veritable mountain of data stands behind every new agent offered to you by pharmaceutical manufacturers—a reassuring testimonial to the efficacy, safety and purity of the drugs you will prescribe today to lower the cost of disease to your patients.

Pharmaceutical Manufacturers Association
Pharmaceutical Advertising Council

1155 Fifteenth St., N. W., Washington, D.C. 20005

This message is brought to you as a courtesy of this publication on behalf of the producers of prescription drugs.

When irritable colon feels like this

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

- ☐ **belladonna alkaloids—for the hyperactive bowel**
- ☐ **simethicone—for accompanying distension and pain due to gas**
- ☐ **phenobarbital—for associated anxiety and tension**

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

Spring peeper (tree frog, *Hyla crucifer*): this small amphibian can expand its throat membrane with air until it is twice the size of its head.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 28; Medical College of Alabama, 1967; National Board; serving general surgery residency Available July 1971. LW-3

Age 49; University of Pittsburgh, 1951; seeking group or industrial practice. LW-3/1

Age 27; George Washington University 1969; National Board; Available July 1971. LW-3/2

Age 37; University of Louisville, 1964; seeking group, industrial, associate, or institutional practice. LW-3/3

Internal Medicine—

Age 34; Georgetown University, 1962; Board certified; seeking group or associate practice. Available August 1971. LW-4

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 31; University of Arkansas, 1964; Board certified; seeking group or associate practice, interest in cardiology. Available July 1971. LW-4/3

Age 31; Albert Einstein College, 1964; National Board, seeking group, associate or institutional practice. Available July 1971. LW-13

Age 34; Louisiana State University, 1963; Board certified; seeking group practice. Available August 1971. LW-13/5

Age 29; Emory University School of Medicine, 1966; Board eligible, seeking group practice. Available July 1972. LW-4/5

Age 32; University of Tennessee, 1963; Board eligible, seeking group, associate, institutional, or private hospital practice. Available July 1971. LW-4/6

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 37; University of Cincinnati, 1963; Board eligible, seeking solo, group, associate, or institutional practice. Available July 1971. LW-4/8

Age 32; University of North Carolina, 1965; Board certified, seeking academic (teaching, research) practice. Available October 1972. LW-4/9

Obstetrics-Gynecology—

Age 34; New York Med. College, 1964; National Board, Board eligible; seeking group or associate practice. Available August 1971. LW-5/1

Ophthalmology—

Age 30; University of Nebraska, 1965; seeking group or associate practice. Available July 1971. LW-6

Age 30; Georgetown University School of Medicine, 1965; National Board. Available March 1972. LW-6/1

Age 34; Yale University, 1964; National Board, Board certified; seeking solo, group, industrial or associate practice. Available July 1971. LW-6/2

Age 35; Louisiana State University, 1963; Board eligible, seeking group or associate practice. Available January 1972. LW-6/3

Orthopedic Surgery—

Age 32; University of Illinois, National Board, seeking associate practice. Available February 1972. LW-14

Otolaryngology—

Age 33; Loyola University, 1964; Board eligible; seeking solo or associate practice. Available July 1971. LW-7

Age 33; Wayne State University, 1966; Available July 1971. LW-7/1

Age 31; Northwestern University, 1964; Board eligible; National Board; seeking solo, group or associate practice. Available September 1971. LW-7/2

Age 31; University of Illinois, 1964; National Board, seeking group or associate practice. Available July 1971. LW-7/3

Pathology—

Age 32; Case Western Reserve University, 1964; National Board; Board certified; seeking group, associate or institutional practice. Avialable August 1971. LW-8

Age 33; Creighton, 1964; Board certified; National Board; seeking group or associate practice. Available July 1971. LW-8/1

Age 39; Ankara Medical School, Turkey, 1956: Board eligible; seeking associate practice. LW-8/2

Pediatrics—

Age 31, American University of Beirut, 1967; Board certified; interested in pediatrics/pediatric cardiology. seeking group or associate practice. Available July 1971. LW-9/1

Age 36; McGill University, 1959; National Board, Board certified, interested in Genetics program. Available July 1971. LW-9/2

Radiology—

Age 31; University of Kansas, 1965, seeking group practice. Available July 1971. LW-10

Age 31; Vanderbilt University, 1965; National Board; Board certified; seeking group or associate practice. Available July 1971. LW-10/1

Age 30; University of Kentucky 1965; Board eligible; seeking group, or associate practice. Available July 1971. LW-10/3

Age 32; Medical College of Alabama, 1963; completing residency in radiology. LW-24/2

Age 30; Medical College of Virginia, 1966; National Board, seeking solo or associate practice. Available June 1972. LW-10/4

Age 37; Indiana University, 1960; Board certified, seeking associate practice. Available summer-fall 1971. LW-10/5

Age 55; Tulane University School of Medicine, 1941; Board certified, seeking solo, associate, or institutional practice. Available April 1971. LW-10/6

Surgery—

Age 33; Tufts University School of Medicine, 1962; National Board, Board certified, seeking group, industrial, or associate practice. Available Summer 1971. LW-11/3

Age 40; Louisiana State University, 1964; Board certified, seeking group, associate, or institutional practice. Available July 1, 1971. LW-11/4

Age 40; Southwestern Medical School, 1964; Board eligible, seeking solo or associate practice. Available September 1971. LW-11/5

Urology—

Age 41; Medical College of South Carolina, 1960; Board certified, seeking group or associate practice. Available June 1971. LW-12/2

Age 33; New York Medical College, 1964; National Board, seeking group, associate, or institutional practice. Available September 1971. LW-12/3

Physicians Wanted

Special Openings—

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Opportunity in town of 4,000 population in trade area of 50,000 population, located within 100 miles of two metropolitan areas in south Alabama. Industrial and farming area. 44-bed hospital. Office space and equipment available in new building with another physician. Several churches, schools, and service clubs. PW-1

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

For town of 10,000 population in county of 40,000 population located in scenic mountainous section of Northeast Alabama. Office space and equipment available. Hill-Burton hospital-nursing home. Expanding industries in top agricultural area. PW-1-2

Physician wanted to join 39 year old Medical College of Alabama graduate in a well established practice in West Central Alabama town. Salary initially followed by full partnership. PW-1-4

Opportunity in town of 2,500 population in Northeast Alabama in trade area of 15,000 population, located 7 miles from city of 55,000, and four miles from a 300-bed modern hospital. Position available for one who has not served military com-

PLACEMENT SERVICE

(Continued from Page 835)

mitment. Clinic building and some equipment available. Willing to build a new clinic for two doctors or a small group. Especially seeking general practitioner and internist. PW-1-7

Opportunity for two general practioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Associate needed in general practice and surgery in northeast Alabama town of 6,000 population. Modern 70-bed hospital. Prefer doctor less than 40 years of age. Salary guaranteed first year, then partnership. PW-1/9

Opportunity available July 1st in town of 2500 near the Gulf. No investment required and most of the equipment is less than three yars old. Hospital in town. Emergency calls shared by four other doctors. Excellent recreational facilities. PW-1/10

The aim of education is to enable a person to continue his education.

—John Dewey

Today a dollar earned is a nickel saved.

—Herbert Prochnow

Few people give themselves time to be friends.

—Robert Southey

Make the most of yourself, for that is all there is to you.

—Ralph Waldo Emerson

Nothing is too wonderful to be true.

Faraday

Pneumonia Vaccine Studied

A live vaccine which may become an important factor in preventing certain types of pneumonia and bronchitis is under intensive research at the University of North Carolina.

According to a release by the National Society for Medical Research, the new vaccine has been effective in laboratory animal studies against an organism named Mycoplasma pneumoniae. At least half of all pneumonia occurring in adolescence and young adulthood is caused by the organism. They are among the smallest free-living organisms and are distinct from both bacteria and viruses, said Dr. Wallace Clyde, Jr., of the University's School of Medicine. "The infections, while rarely fatal, are important causes of lost work and school time among civilians and lost duty time in the Armed Forces," he reported.

Old Bones Rejuvenated

There is an old saying among orthopedic physicians that if two bone ends of a young child are left in the same room they will heal.

This is not the case with older people, unfortunately, but medical researchers at Johns Hopkins University School of Medicine report a new substance which may make old bones heal like young ones.

A series of successful experiments with a substance called Calcitonin in bones of laboratory puppies and older dogs has led to consideration of further investigating the substance in actual clinical trials at the University.

The National Society for Medical Research in Washington attested to the great contribution the research project could make to mankind, should equally successful results be found with human patients.

IN ASTHMA
IN EMPHYSEMA

optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

Nothing new about Synirin other than ...it's a stable, uncoated, fast disintegrating tablet of aspirin with pentobarbital potentiating the aspirin analgesia.

Synirin®

ASPIRIN 5 GR.—PENTOBARBITAL 1/8 GR.

ETHICAL ANALGESIA (economical if prescribed in 100 units with privilege of refills)

PRESCRIBING INFORMATION: To relieve tension headaches and arthritic pains, 2 tablets q 4 h. Aspirin and pentobarbital begin their action promptly, continuing for about 4 hours. The small pentobarbital content gives no perceptible sedation. Pentobarbital is destroyed by the body and there is no accumulation. Synirin will supply any aspirin therapy with equal safety. Use aspirin with caution in peptic ulcer.

EACH UNCOATED TABLET CONTAINS:

Aspirin ..... 325 mg. (5 gr.)
Pentobarbital* ..... 8 mg. (1/8 gr.)
*May be habit forming.

Federal law prohibits dispensing without prescription
DISPENSED IN BOTTLES OF 100 AND 1000 TABLETS

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

A clinical supply of this new aspirin formulation may be requested.

Don't Give Him Credit

Who does it? Don't become idolatrous and worship the M. D., for we medics can't make even a scratch heal! Only God does the curing! Physicians can help straighten the broken bones and cut out tumors, but no doctor ever heals you.

—Dr. George Crane, as quoted in Minnesota Medicine.

Anything Else?

A patient in the doctor's office was listing his complaints to the nurse. "I've got a bad case of arthritis," he enumerated, "there's a buzzing in my ear, my ankle is sprained, I see spots in front of my eyes, and I've thrown my thumb out of joint." "You must be awfully healthy," replied the nurse, "to stand the pain."

—Mark Wacks

FELLOWSHIPS IN RADIATION MEDICINE

Fellowships available in Radiation Medicine at University Center in Blue Grass Region beginning July 1, 1971 in Radiotherapy and Nuclear Medicine with emphasis on Oncology. Liberal fellowship stipends for those with prior training or practice. Rapidly developing field of specialization for those interested in new career. Inquiries to

Y. Maruyama, Chairman
A. B. Chandler Medical Center
University of Kentucky
Dept. of Radiation Medicine
Lexington, Kentucky 40506
Telephone: 606—233-5108

of the tetracycline-nystatin products

...none is lower priced

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

373-1

INDEX TO ADVERTISERS

Arch Laboratories 820

Beltone ..... 3rd Cover
Blue Cross-Blue Shield 821
The Bradley Center 830
Bristol Laboratories 790, 791
Burroughs Wellcome 786

Campbell Soup 805

Dow Chemical Company 784, 785

C. B. Fleet Company, Inc. 827

Eaton Laboratories 789

Geigy Pharmaceuticals 779
Guest House Motel 814

Highland Hospital 840
Hill Crest Hospital 781
Hoechst Pharmaceuticals 823

Lederle Laboratories 839
Eli Lilly & Co. ..... 1st Cover, 796

Wm. P. Poythress 793, 794, 837, 838

Ranch House Motel 826
Roche Laboratories ..... 2nd Cover, 777, 815, 828, 829, 4th Cover

G. D. Searle 806, 807
Smith, Kline & French Laboratories 824
E. R. Squibb & Sons 783
Stuart Pharmaceutical Division of Atlas Chemical Industries, Inc. 832, 833

Upjohn Company 808, 812, 813
USV Pharmaceuticals 818, 819

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: MRS. ELIZABETH HARKINS, ACSW, *Coordinator of Admissions*

or

SAMUEL N. WORKMAN, M. D.
Chief of Clinical Services

CHARLES W. NEVILLE, JR., M. D.
Associate Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Who are the *Beltone*® Dealers who serve you throughout Alabama?

BIRMINGHAM:
A. Fraser Pattillo, Jr.
Beltone Hearing Aid Center
2004 3rd. Avenue, North
Telephone: 323-4271

DOTHAN:
Jesse L. Thompson
Beltone Hearing Aid Center
313 North Foster Street
Telephone: 794-5082

FLORENCE:
Chester H. Partin
Beltone Hearing Aid Center
412 South Court Street
Telephone: 764-4183

GADSDEN:
Al B. Nix
Beltone Hearing Aid Service
613 Chestnut Street
Telephone: 547-4441

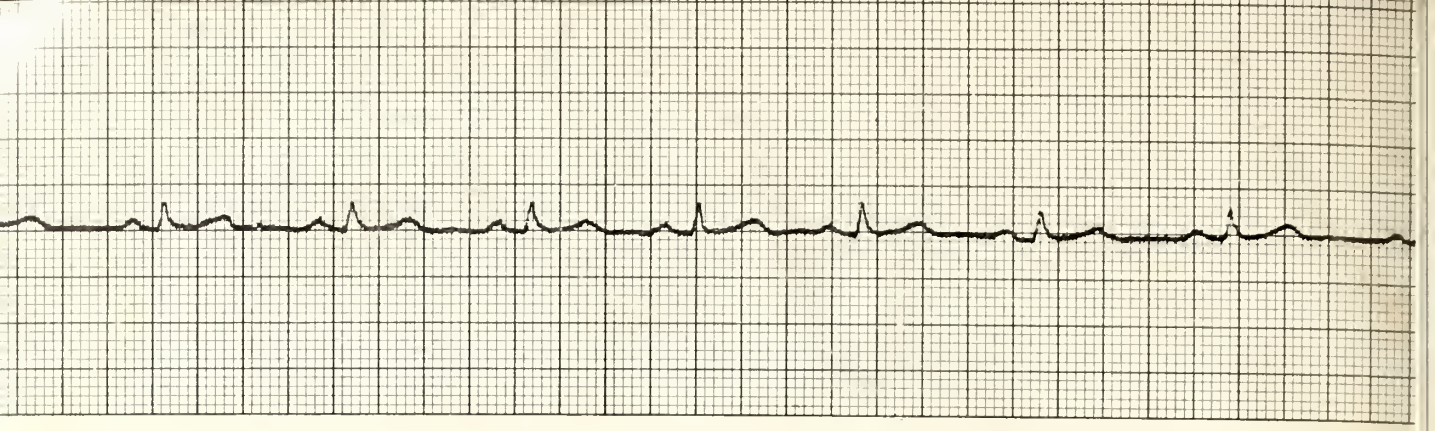
HUNTSVILLE:
K. Louis Azar
Beltone Hearing Aid Service
302 Clinton Avenue, East
Telephone: 539-5805

MOBILE:
Paul M. Casey
Beltone Hearing Aid Service
250 St. Francis Street
Telephone: 432-7606

MONTGOMERY:
John T. McGaha
Beltone Hearing Aid Service
224 Bibb Street
Telephone: 264-9559

Beltone® ELECTRONICS CORPORATION

Beltone Building • 4201 W. Victoria Street, Dept. 8559 • Chicago, Illinois 60646



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) 2-mg, 5-mg, 10-mg tablets

helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose™ packages of 1000.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110